REPORT

OF THE

Gosamvardhan Enquiry Committee

Appointed by U. P. Government Resolution No. 2207/XIIE—538-52, dated April 4, 1953

Parts I and II

ALLAHABAD

SUPERINTENDENT, PRINTING AND STATIONERY, UTTAR PRADESH, INDIA

1955

GOVERNMENT OF UTTAR PRADESH

ANIMAL HUSBANDRY DEPARTMENT

No. GEC-2/XII-E—542-1954

Dated Lucknow, January 15, 1955

RESOLUTION

READ—Report of the Gosamvardhan Enquiry Committee, Uttar Pradesh, 1954.

OBSERVATIONS—In pursuance of the assurance given by the Government to the Legislative Assembly on December 12, 1952, the State Government had, as a step preliminary to the formulation and initiation of necessary measures in terms of Article 48 of the Constitution of India (reproduced below) :

> "The State shall endeavour to organise agriculture and animal husbandry on modern and scientific lines, and shall, in particular, take steps for preserving and improving the breeds, and prohibiting the slaughter of cows and calves and other milch and draught cattle."

appointed a Committee designated as "Gosamvardhan Enquiry Committee". Government are grateful to the Chairman and the members of the Committee for their valuable Report, and take this opportunity to place on record their appreciation of the labour and industry devoted to the task.

The recommendations made by the Committee are receiving Government's careful and earnest consideration.

ORDER—Ordered that the Resolution be published in the *Uttar Pradesh Government Gazette*, for general information.

ORDERED also that copies of the Report and of the Resolution, be released for sale to the public.

By order,
K. C. MITTAL,
Secretary.

No. 518/G.E.C.

CAMP MUSSOORIE :
Dated September 5/7, 1954.

FROM

SRI SITA RAM, M.A., LL.B., D. LITT.,
CHAIRMAN, GOSAMVARDHAN ENQUIRY COMMITTEE,
UTTAR PRADESH,

To

THE SECRETARY TO GOVERNMENT, U. P.,
ANIMAL HUSBANDRY DEPARTMENT,
LUCKNOW.

SIR,

I beg to submit herewith the Report of the Gosamvardhan Enquiry Committee which was appointed by the Uttar Pradesh Government in accordance with their Resolution no. 2207/XII-E—538-52, dated April 4, 1953, published in the *Uttar Pradesh Government Gazette*, dated April 11, 1953.

2. The Committee originally consisted of 21 members, one of whom (Sri B. N. Lahiri) resigned after attending only the first meeting. The other 20 have signed the Report which is a unanimous one.

3. I have great pleasure in bringing to the notice of Government the splendid work put in by Sri H. B. Shahi, Secretary of the Committee and his staff. The committee adopted the following Resolution at their meeting of the 17th August, 1954 :—

> "The Committee has pleasure in putting on record their deep sense of appreciation of the services rendered by our colleague-Secretary, Sri H. B. Shahi, who put his whole soul in this work in addition to his heavy departmental duties. The Committee freely drew on his advice and experience. The Committee is also grateful to the several members of his staff who contributed their lot to the work of this Committee. In this connection, names of Sarvsri H. C. Joshi, Gaushala Development Officer (who acted as Assistant Secretary of the Committee as well), I. U. Gehani, Stenographer to Animal Husbandry Commissioner-*cum*-Additional Secretary to Government, Animal Husbandry and Agriculture departments and Secretary, Gosamvardhan Enquiry Committee and B. C. Tewari Stenographer on the staff of Animal Husbandry Commissioner-*cum*-Additional Secretary to Government, Animal Husbandry and Agriculture departments are worth mentioning specifically. To one and all, mentioned or not, the Committee is deeply indebted."

Yours faithfully,
SITA RAM.

PART I—MAIN REPORT

INDEX I

INDEX II

RECOMMENDATIONS

Report of the Gosamvardhan Enquiry Committee

PART I

CHAPTER I

INTRODUCTORY

Appointment of the Committee

The Gosamvardhan Enquiry Committee was appointed by the Government of Uttar Pradesh, *vide* Animal Husbandry Department's Resolution no. 2207/XIIE—538-52, dated April 4, 1953, published in the *Uttar Pradesh Government Gazette*, dated April 11, 1953. The Resolution runs as follows :—

RESOLUTION

In pursuance of the undertaking given by the Government to the Legislative Assembly on December 12, 1952, the Government have, as a step preliminary to the formulation and initiation of necessary measures in terms of Article 48 of the Constitution of India, decided to appoint a Committee designated as "Gosamvardhan Enquiry Committee" consisting of the following members :—

Article 48—The State sh all endeavour to organise agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving the breeds and prohibiting the slaughter of cows and calves and other milch and draught cattle.

(1) Dr. Sita Ram, 'Champa', Civil Lines, Meerut — *Chairman.*

(2) Sri Ahmad Said Khan (Nawab of Chhatari), Rahat Manzil, Aligarh

(3) Sri Bajrang Bahadur Singh, M.L.C., Girja-Niketan, 3 Shah Najaf Road, Lucknow

(4) Sri Akhtar Husain, M.P., 10 La Place, Lucknow

(5) Sri B. N. Lahiri, Retired I. G. Police, U.P., 3 Ponnappa Road, Allahabad

(6) Sri Rananjai Singh, M.L.A., Rajbhawan, Ramnagar, Amethi Station, N. R., Sultanpur

(7) Sri Suresh Prakash Singh, M.L.A., village Tikra, post office Biswan, Sitapur

(8) Sri Akshya Karan, Gandhi Ashram, Sewapuri, Banaras

(9) Sri Gopal Shastri, D. 59/91, Garden Colony, Banaras.

(10) Sri Malkhan Singh, M.L.A., Aligarh

(11) Sri Raja Ram Shastri, M.L.C., 11/255 Gwaltoli, Kanpur

Members.

(12) Sri Lila Dhar Asthana, M.L.A., Unnao ..
(13) Sri Babu Lal Mittal, M.L.A., Subashnagar, Agra .. ..
(14) Sri M. J. Mukerjee, M.L.C., 17 Cantonment Road, Bareilly .. .. ..
(15) Sri Swami Bhaswarananda, Ram Krishna Mission, Home of Service, Banaras ..
(16) Sri Mohammad Habib, Professor of History and Politics, Badar Bagh, Muslim University, Aligarh .. .. .. *Members.*
(17) Sri Ram Naresh Shukla, M.L.A., village Rokiyapur, post office Lala Bazar, Pratapgarh ..
(18) Sri Vishnu Sharan Dublish, M.L.A., 97/7 Chhipi Tank, Meerut .. ..
(19) Sri Dindayal, M.L.A., post office Gurukul Kangri, Saharanpur .. .. ..
(20) Sri Virendra Verma, M.L.A., Ansari Road, Muzaffarnagar .. .. ..

(21) Sri H. B. Shahi, Animal Husbandry Commissioner, Vidhan Bhawan, Lucknow, U. P. .. *Member-Secretary.*

(Sri B. N. Lahiri attended the first meeting of the Committee. Thereafter, being unable to attend the subsequent meetings, he submitted his resignation which was duly accepted.)

The terms of reference assigned to the Committee read as follows :—

To examine—

(*a*) the trend of periodical variation in the population of cow and its progeny in the State, with particular reference to the supply of milk and bullock power ;

(*b*) the problem of improvement and preservation of cow in the context of available nutrition and our fodder resources ;

(*c*) the problem of stray and wild cattle as also the maintenance and economic utilisation of old, decrepit and unproductive cattle and the possibilities of utilising institutions like the Gaushalas and Gosadans for the purpose ;

(*d*) the methods of improvement of breed of cattle and for increasing the produce and ensuring the purity of dairy products ;

(*e*) review of the existing regulations regarding cow slaughter and the need for legislation in this behalf ; and

to submit its recommendations to Government detailing all the essential measures considered necessary for their implementation.

Meetings of the Committee

1. *Inaugural meeting*—The inaugural meeting was held at Lucknow on July 29, 1953. All members except Sri Virendra Varma and Professor Mohammad Habib were present. Sri Charan Singh, Minister for Agriculture, was present by special invitation. After the opening observations of the Chairman, Dr. Sita Ram (*vide* Appendix II), the inaugural address was delivered by the Hon'ble Chief Minister, Pandit Govind Ballabh Pant (*vide* Appendix III).

Both the Ministers having left, almost all members present took part in the deliberations on the 29th and 30th July. The Chairman's suggestion that the preliminary spadework should be entrusted to Sub-Committees was accepted and the following Sub-Committees were formed to report on the problems assigned to them :—

I—Cattle Nutrition and Dairy Sub-Committee

(1) Sri Ahmad Said Khan, Nawab of Chhatari — *Chairman.*

(2) Sri Akshya Karan
(3) Sri Dindayal Shastri, M.L.A.
(4) Sri Vishnu Sharan Dublish, M.L.A.
(5) Sri Malkhan Singh, M.L.A.
(6) Sri Akhtar Husain, M.C.S.
(7) Sri M. J. Mukerjee, M.L.C.
(8) Sri Virendra Varma, M.L.A. — *Members.*

(9) Sri H. B. Shahi, Animal Husbandry Commissioner, U. P. — *Member-Secretary.*

This Sub-Committee should deal with: (i) the trend of cattle population in the State and its relation to the available fodder and the carrying capacity of the State, (ii) the examination of the ways and means of increasing the fodder resources of the State, and (iii) the examination of ways and means of increasing the producing and improving the quality of dairy products.

II—Cattle Economics Sub-Committee

(1) Sri Dindayal Shastri, M.L.A. — *Chairman.*

(2) Sri Suresh Prakash Singh, M.L.A.
(3) Sri Vishnu Sharan Dublish, M.L.A.
(4) Sri Babu Lal Mittal, M.L.A.
(5) Sri Raja Ram Shastri, M.L.C.
(6) Sri Rai Bajrang Bahadur Singh, M.L.C.
(7) Sri Virendra Varma, M.L.A.
(8) Sri Akshya Karan — *Members.*

(9) Sri H. C. Joshi, Gaushala Development Officer. — *Secretary.*

This Sub-Committee had the following items to deal with : (i) Cattle Slaughter, (ii) Unlicensed Slaughter houses, (iii) Stray, Wild, old, Diseased and Uneconomic Cattle ; (iv) Cattle Markets, (v) Guashalas, (vi) Gosadans, and (vii) the Hide-flaying Centre at Bakshi-ka-Talab.

III—Cattle Improvement Sub-Committee

(1) Sri Bajrang Bahadur Singh, M.L.C.	*Chairman.*
(2) Sri Gopal Shastri	*Members.*
(3) Sri L. D. Asthana, M.L.A.	
(4) Sri Suresh Prakash Singh, M.L.A.	
(5) Sri Ram Naresh Shukla, M.L.A.	
(6) Sri Raja Ram Shastri, M.L.C.	
(7) Sri M. J. Mukerjee, M.L.C.	
(8) Sri Swami Bhaswarananda	
(8) Sri N. K. Bhargava, Dairy Development Officer	*Secretary.*

This Sub-Committee was assigned the following functions : (i) to report on the cattle breeding work done in the State and suggest methods of improvement and (ii) inspection of selected centres and institutions in the State including the Indian Veterinary Research Institute.

IV—Cattle Improvement Legislation Sub-Committee

(1) Sri Malkhan Singh, M.L.A.	*Chairman.*
(2) Sri Rananjai Singh, M.L.A.	*Members.*
(3) Sri L. D. Asthana, M.L.A.	
(4) Sri Gopal Shastri	
(5) Sri Ram Naresh Shukla, M.L.A.	
(6) Sri Babu Lal Mittal, M.L.A.	
(7) Sri Akhtar Husain, M.C.S.	
(8) Sri Mohammd Habib	
(9) Sri L. S. Nigam	*Secretary.*

The task allotted to this Sub-Committee was to : (i) examine the various correlated existing legislative measures and their working, (ii) vet the proposed legislation in respect of—(*a*) control of livestock diseases, (*b*) livestock improvement, (*c*) improvement of Gaushalas, (iii) formulate measures for legislation to prohibit unhygienic collection of dairy animals in the urban areas, and (iv) examine the Municipal and District Boards regulations regarding cattle slaughter and cattle ponds.

The Sub-Committees were authorised to lay down their own procedure to examine witnesses and to make local inspections.

2. *Meeting of February* 9, 1954—The second meeting of the Committee was held on February 9, 1954, at the Vidhan Bhawan, Lucknow. As reports of the various Sub-Committees were not completely ready, the Committee decided to meet later and examine some representative witnesses—official and non-official. A list was drawn up accordingly (*vide* Appendix IX). Of these, some attended, some sent memoranda only and some did not respond (*vide* Appendices X and XI).

3. *Meetings of March 27 to* 31, 1954—At the third meeting held at Lucknow from March 27 to 31, 1954, a number of witnesses were examined. It was decided to record later the evidence of some important witnesses who could not attend this meeting.

4. *Meetings of April 5 to* 7, 1954—At this meeting held at Lucknow on April 5, 6 and 7, 1954, the evidence of a few witnesses was recorded. A special Sub-Committee was asked to report on the problem of " Stray Cattle". Its report appears as Appendix VIII. The Committee then discussed the rules for advancing ' taqavi loans ' by Government and in this connexion the Revenue Secretary (Sri Zahurul Hasan) was also examined.

The reports of the various Sub-Committees (*vide* Appendices IV to VII), were then considered and decisions taken with regard to each item after full discussion.

After the termination of the meeting of April 7, 1954, the Chairman was authorised to send *ad interim* to the Chief Minister, the important recommendations of the Committee. This was done on the same date and these recommendations appear as Appendix XIV. A copy of this was sent on the same date (April 7, 1954), to the Minister for Agriculture.

5. The final meeting of the main Committee was held on August 17, 1954, when the draft report was considered and adopted.

Working and the itinerary of the Sub-Committees

The Cattle Nutrition and Dairy Sub-Committee (with Nawab Sahib Chhatari as Chairman) held, in all, three meetings and examined the issues involved in the terms of reference assigned to it. Two notes prepared by the Secretariat of the main Committee dealing with (i) trend of cow and buffalo population in U. P. (1899—1951) and (ii) a note on the requirements and availability of nutrients for cattle population in U. P. were discussed in detail. The report of the Sub-Committee and its recommendations are given in Appendix IV. The Comittee held one of its sittings at Aligarh and the other two sittings were held at Lucknow. During the course of their itinerary, the members visited the Central Dairy Farm, Aligarh, the College of Veterinary Science and Animal Husbandry, Mathura, Mechanized State Farm, Madhurikund (Mathura) and the Dairy attached to the Dayal Bagh Institute at Agra and familiarized themselves with the working of these institutions. Earlier, the Chairman and Nawab Sahib of Chhatari, had visited the hide-flaying and curing centre at Bakshi-ka-Talab, Lucknow.

The Cattle Economics Sub-Committee (with Sri Din Dayal Shastri as Chairman) held four meetings and with a view to acquire firsthand knowledge of the working of the *Gosadans, Gaushalas* and other institutions, it toured the districts of Bareilly, Moradabad, Rampur and Meerut. During the course of its itinerary, the Sub-Committee assessed the extent of unauthorised slaughter of cattle prevalent in the State, inspected private and Government Gosadans and also some cattle markets. A questionnaire was also prepared by this Sub-Committee and issued to heads of all the political parties, various religious sections, all local bodies, all Gaushalas, all Members of Lok Sabha, Members of Legislative Council and Members of Legislative Assembly, all Commissioners and District Magistrates, all Heads of departments, Vice-Chancellors of all Universities and important institutions and individuals. Further, 250 witnesses were examined as also 200 replies received in response to the questionnaire referred to above. The detailed report of the Sub-Committee, along with its recommendations, is given in Appendix VI.

The Cattle Improvement Sub-Committee (with Raja Sahib Bhadri as Chairman) held four meetings and visited a number of institutions connected with cattle improvement work. The comprehensive report of this Committee, along with its detailed recommendations is given in Appendix V.

The fourth Sub-Committee, viz. the Cattle Improvement Legislation Sub-Committee (with Sri Malkhan Singh as Chairman) held four meetings and examined 70 witnesses in the districts of Banaras, Allahabad, Faizabad, Hardwar and Rishikesh. The Committee also examined the working of the existing legislative enactments in U. P. and also the drafts of the U. P. Animal Contagious Diseases and Pest Bill, the U. P. Livestock Improvement Bill and the U. P. Gaushala Bill. The detailed report of this Committee, along with its recommendations and the list of persons examined in different districts in connexion with their work, is given in Appendices VII and XII.

Besides the touring undertaken by the four Sub-Committees, the Chairman, in company of the Deputy Directors of Animal Husbandry of the Circle concerned, visited the Cattle Breeding Farms at Babugarh and Hastinapur in Meerut District, Madhurikund Mechanized State Farm and College of Veterinary Science and Animal Husbandry in Mathura and some Gaushalas and cattle breeding and dairying centres in Lucknow, Agra, Aligarh, Bhadri, Allahabad, Mirzapur, Ghazipur, Ballia, Azamgarh and Banaras. He discussed the various problems with a number of people at these places.

CHAPTER II

Historical Background

Domestication of the important farm animals was accomplished long before the beginning of written history but long after man had become a tool-maker and tool-user of considerable skill. The association of livestock with human beings thus dates back to the pre-historic age, when the primitive man gradually started changing his habits of an entirely wild existence to those of an orderly settled life. Agriculture consequently, became a part and parcel of his existence and he did not wholly depend for his food on all that was readily available in nature. The first domesticated animal, as records appear to show, was the dog which has, since the dawn of civilisation, been a constant companion of the gradually evolved civilized man. Other animals then came into his life's routine as his needs started progressively increasing and when man took to the ploughing of land and production of foodgrains, the cow and the horse became the normal associates of his early pastoral life. Historical evidence provided by the discoveries and excavations made by the Archaeological Department (Mohan-jo-Daro, Harrappa and the Nile Valley civilization) show that even in pre-historic period different classes of livestock were under domestication and had become an essential part of man's daily routine and progressive development.

Like all other countries in the world cattle gradually assumed a predominant place in the agricultural economy of the Aryan civilisation. In India, in particular, the cow found a special place in the agricultural economy because of the multifarious benefits this animal bestows on mankind and thus it became a part and parcel of the human family. We find in the cow, combination of a bullock supplier, a giver of health giving milk and a supplier of manure. No other animal has contributed so much to the evolution of both man and his agriculture as the cow. Early Vedic civilisation pays handsome tribute to the glory of the cow so much so that this animal has been for ages an object of veneration. As civilisation progressed, it is noticed that greater and greater emphasis was laid on the development of the cattle wealth which was found to be essential for the agricultural industry. Even in the earliest phase of civilisation, it was recognised, that both plant and animal husbandry had to go hand in hand. Thus, agriculture and animal husbandry have since ages past, been like inseparable twin sisters, complementary to each other. This intimate association of livestock with agriculture has been regarded as the vital basis of a common industry round which the life of the cultivator is circumscribed. History abounds in well connected evidence, which shows that even hundreds of years back, there was a well thriving cattle industry in this country. Its importance to agriculture was so well recognised that definite breeding plans were worked out with specific objects in view with the consequence that large number of breeds, suited to particular requirements of different parts of the country, were progressively evolved. This planned development of livestock industry is not a

unique feature of India alone. All other countries present the same trend of evidence and show how long with the evolution of the man the evolution of his livestock took place in accordance with the varying needs of those countries for food and other necessities of life. This, in brief, is the origin of the different breeds in different parts of India today and explains why cattle have been developed for specialised functions such as milch, draught and trotting. As population increased, the pressure on land for coping with the requirements of men and the animal, progressively increased. In the earlier days, there being enough of pastures and smaller human and cattle population and restricted human needs, it was easily possible to rear large and valuable herds and organise a system of balanced economy as far as agriculture development was concerned. Thus, while the country was producing enough grain for the requirement of the human population, there was an adequate area available for plentiful grazing of animals, which, supplemented by fodder available from agricultur production, assisted in developing the types of quality animals required for the needs of the times and the area in question.

The ever-increasing needs of civilisation and pressure of mounting population influenced the type and character of the animal produced. In our own history we notice that during the earlier British period, when little or nothing was known about mechanisation and the army had to depend on horses and cattle, its requirements predominantly influenced the type of animal produced during that period. Whereas the country at large needed at all times a dual purpose animal which would give enough milk to rear its progeny and some surplus to the man tending the animal, the breeding policy supported by the then Government favoured breeding of different types of animals with particular stress on draught qualities. This effort naturally led to the production of the heavy type of Hissar cattle in the north, the Malvi stock in the central parts of the country and down south we had Halikars and Kangayams which are so well known for their fast trotting qualities. Likewise, in the major part of the Marhatta country a special type of cattle known as the *Gaolao* and the *Khillari* was evolved which is famous for its endurance and fast trotting qualities. These different types met the special requirements of those times. It is obvious, that when greater stress was laid on faster movement of the animal or its heavy load carrying capacity, this type of animal could only be established at the cost of its milk yielding quality. Then came the period when human needs changed and the type developed after years of labour and perseverence, was found to be ill-suited in many parts of the country to the requirements of the changed circumstances. Naturally, therefore, the standard needed modification. It is common knowledge, that the process involved in this adjustment, i.e., effecting modification in a particular fixed type takes generations and is not a task which can be accomplished in a few years. The confusion which arises during such periods of transition naturally produces a varied mixture of livestock, when all over again the farmer starts changing his model to meet the demands created by changed conditions. Granted adequate time and favourable conditions, the

farmers in this country, as in others, would have adjusted themselves to the new set up. However, the agrarian conditions along with the tranquillty needed for sustained efforts progressively deteriorated. Gradually, as the pressure on land increased due to increase in population, the area under cultivation progressively increased and because of this change in agricultural economics the land available for the tending of cattle progressively decreased. Thus, cattle rearing was not as cheap as it used to be before. The triangular problem of man, animal and land gradually started assuming a new shape and because the pressing needs of the human population were always on the forefront, cattle economy gradually receded to the background.

The above observations briefly indicate how development of cattle has taken place in this sub-continent and how the types that we see today have been evolved. In our own State, we find that between 1899 to 1951 human population has increased from 4·26 crores to 6·3 crores. The population of livestock has not, however, materially changed. In fact, a small decline has been registered. The highest cattle population was recorded in 1904 when it was 2·39 crores and the census of 1951 revealed a decrease of 4 lakhs during a period of about 50 years.

These are the factors responsible for the progressive deterioration of our cattle wealth and the land on which they had to thrive. The history of cattle breeding in this country amply bears testimony to the fact that wherever large scale production of quality animals has been taken up, the utilisation of land was so conceived that a proper balance was always maintained in respect of grain and fodder production. Progressive farmers have always considered it essential for their agricultural economy to set apart a certain portion of their land to the raising of nutritious fodder and thereby supplement the grazing available in nature. Large scale cattle rearing, taken on pastoral lines, seldom produces the high quality cattle that are seen in parts of Sind, Punjab, Malwa and down south in Bombay and Madras. It is intimately connected with adequate production from land and stall feeding. The cheaper cattle rearing is made on the basis of free grazing, the poorer the quality of the cattle becomes. This explains why in those parts of the country where stall-feeding has been in vogue for several years, e.g. Rohtak in the Punjab and parts of the State of Bombay and Madras, cattle development has taken place on more rational lines and the animal produced has always been of much higher excellence than that reared on the system of cheap grazing alone.

A word of explanation is necessary about the larger cattle populati on in some areas as compared with others in a State and similar comparison between different States. Paradoxical though it might sound, States with smaller holdings *per capita* maintain comparatively larger number of cattle. On closer analysis, this appears inevitable as the needs of cultivation with larger number of smaller holdings when totalled, will be much greater as compared with the requirements of areas where holdings are bigger. Thus, it would be seen that though theoretically it would appear that where there is greater pressure on land

because of the increase in human population there should be a thinning down of the cattle population, quite the reverse is the case in practice as with the increasing needs of cultivation of a congested population, with smaller holdings, the number of cattle increases directly in proportion to the increase in human population. This explains why in certain States we notice a larger cattle population and how it is directly interlinked with the agricultural needs. A correction of this maladjustment does not lie in a straightforward reduction of the number of cattle but an appreciation of the fundamental basis of this economy and inter-relationship between man, cattle and the land. The factors which have led to this congestion have themselves to be corrected. Thereafter, an approach aimed at further correction of this maladjustment demands a proper balance between soil, plant, cattle and man. If we give back to the soil what has been taken away from it, a healthier and better growth of plant life will be ensured which will harmonise the disjointed economy which at present is leading to all-round deterioration of soil, plant, man and animals which are so much dependent on each other. This again ultimately brings us to the imperative need of a well-planned scientific use of the land which, rather than impoverishing it, will make it progressively richer and capable of adequately serving the needs of the population much more effectively than is the case today. In such a long range approach, all that leads to the deterioration of soil fertility will have to be discarded and with it the shortsighted maladjustments in cropping programmes, which hold out the mirage of quicker and maximum profits and ignore the irreparable damage that is being constantly done to the land on which both men and cattle have to subsist.

Apart from the improper and unbalanced use of the land and the continuous pressure of growing population which it had to carry for years, the other important factors which have led to the deterioration of cattle wealth in this country are those over which the cultivator had no control. For years past, serious epidemics have raged from one part of the country to the other and decimated large herds in periodical cycles. Little or no knowledge was available regarding the control of these cattle diseases, with the result that the helpless farmer thought more in terms of numbers rather than quality. For him the heads mattered more than the efficiency of the cattle, for the simple reasons that he was not certain as to how much of his stock will survive after each periodical cycle of an epidemic passed over his area. Even today, there are large parts of the country where veterinary aid is not readily available and the cattle owner is not quite certain of the fate of his herd in the face of an impending outbreak. Naturally, in such an economy, the numbers had to make up for the quality and the farmer was rest content with the balance left with him and started multiplying this all over again, after the calamity was over.

Again, the science of cattle breeding which was pretty highly developed in the earlier period of our civilisation was progressively neglected. Nowhere in the world has the average farmer ever been

capable of maintaining quality bulls on his own. Precisely the same applied to this country. Between themselves, the State and the philanthropists met this common and vital need of the society and special care was taken to release the best bred bulls for improving the stock of the common people. With the advance of time, these agencies which were providing well bred studs for improving the quality of the general stock did not pay any particular heed to this important aspect of cattle rearing, and whatever was done in the name of religion was a gross abuse of the very principles on which this desirable and essential practice had been established. The result was that large number of scrub bulls were let loose and each successive generation was bred to inferior studs and the deterioration thus went on unabated. This unhappy feature continues even today and there is little appreciation of the colossal harm it is doing to the uplift of the cow and all the measures adopted for the achievement of this objective.

The changed agricultural economy of the country now demands, that cattle rearing should be adjusted to a pattern of land utilisation on which the animals secure their basic needs of nutrition after the requirements of the human population have been fully met. Simultaneously, it has to be appreciated that without balanced animal husbandry development no long range agricultural policy can be laid down for the country. Both the developments have to proceed together or else neglect of cattle industry is bound to reflect on agricultural production. This vicious circle, if not systematically dealt with, will mean the ruination of both. Thus, to get the best out of the land, there should be a balanced agricultural economy in which a planned use of the land ensures the maximum, both for man and animals.

Dealing with the improvement of the cow, it is now commonly agreed that the clear cut objective of cattle breeding should be to produce an animal which will yield enough milk and thereby make the cow an economic proposition and simultaneously make a male calf available which will suit the agricultural needs of the area concerned. This is the background on which animal husbandry development has to be shaped in the future. In attempting this approach, recourse has to be taken to the modern concepts of animal breeding, nutrition and disease control, which have been so highly developed in other advanced countries and to adopt the results of scientific researches in accordance with the needs of the local conditions.

Cow *versus* Buffalo

In the preceding observations, a brief resume of the historical background indicating the place of cattle in the agricultural economy and the various causes which have gradually led to its progressive deterioration has been given. While examining the question of the improvement of the cow and the multi-pronged attack necessary for its economic rehabilitation, the perennial problem of the cow versus buffalo inevitably comes to the forefront. A view has been expressed that it is wasteful to retain two species of domestic animals

where one can meet the requirements of both milk and draught. Considering the demand of the villagers, the primary unit of our agricultural economy, the premises put forward on this behalf appear rather unchallengeable. With the small holdings that exist throughout the State, the cultivator is not in a position to maintain different types of animals to satisfy his needs for draught and milk. In his precarious economy, however, he maintains both the cow and the buffalo, the animal that yields quick results naturally receives preferential treatment. Despite all the veneration and sanctity attached to the cow, when it comes to the question of feeding, the buffalo always receives a favoured treatment and the cow has to subsist on whatever remains after feeding the buffaloes, bullocks and calves, in order of priority. The treatment meted out to buffaloes and bullocks is, in many instances, of the same order. In this curious and unhappy imbalance, the natural sequence that follows, is the emphasis on the breeding of the male progeny of the cow and the female of the buffalo. Since slaughter is against the natural instinct of the people, the males of the buffalo are allowed to die a natural death from starvation and the female cow carries on a miserable starving existence as compared with her opposite number, the buffalo. With the background of this normal practice obtaining almost all over the country, it is argued that rational thinking and inevitable trend of logic should lead one to the conclusion that if it is in the economic interest of the cultivator to have an animal serving the needs of both draught and milk the obvious policy, however difficult it might be to implement, should be to lay stress on the development of the cow and all resources of the State should be husbanded and spent on the achievement of this objective. Better placed as the buffalo is from the economic point of view today, and there is a a natural selection in its breeding, it will be able to maintain its own for quite a long time till the cow has been able to regain its rightful place in the Indian agriculture. Perhaps the approach of scientific methods that lead to the rehabilitation of the cow as an economic animal will also provide a way through the present seemingly blind alley as to how a proper balance can be struck in the maintenance of the cow and the buffalo.

Often a comparison is drawn between the cow and the buffalo in that the latter has a higher yield of milk with greater butter fat percentage and the animal is more economic utiliser of coarse fodder available under the Indian conditions. To this, the reply given is that the comparison is hardly fair as it lies between an ill-nourished and neglected cow and a better cared for and well nourished buffalo. Some data on scientific breeding, though meagre for making effective comparisons, seem to support the view that the neglected cow is more responsive to better treatment and care than the buffalo.

In his own inimitable style and power for marshalling and clear analysis of facts, Gandhiji made the following observations in his

opening speech of the Go-Sewa Sangh in 1930 :—

"We have a weakness. In a way it is common to all mankind but it is a special trait of Indian character that we readily take to things which are easy to get and give up things that are difficult to accomplish. In khadi, village industries and everywhere people seek ease, cheapness and convenience. People relish buffalo's milk because it is sweet and cheap."

"Even from the Vedic times we have been singing the glories of the cow and not of the buffalo. Had the cow not been given this status it would have been extinct, and along with it the buffalo also, long ago. I have seen the comparative figures of both the animals in India. Both are numerous. But neither flourishes. The herdsman keeps the cow and buffalo only so long as it pays to do so and sells it off to the butcher as soon as it ceases to pay. To save their lives the humanitarians buy them up but with the money so gained the butcher purchases other cows and buffaloes. Thus, a few cows may be rescued but the destruction of the cows' progeny goes on. The correct remedy, therefore, is to forget the cow that has been sold and spend our money in improving the breed of the cow, increasing its value and teaching the cow keepers their duty."

"Let nobody fear that if every one eschews its milk and ghee the buffalo is bound to perish. As I have said above, it is hardly possible. But even if it were possible there is no harm. The buffalo will cease to be a domestic animal and will become wild. The fact is that if there is any animal which can survive, it is the cow only. Along with the cow the buffalo will be automatically saved, because the milk of both is useful for us. But if people go on following these haphazard ways, as they have hitherto been doing, in utter disregard of sicientific methods, the cow no less than the buffalo will be destroyed as has happened in so many other things in our country. Our ignorance has been the greatest contributing factor to these state of affairs. We shall be able to know and observe our duty towards animals only by an intelligent study of the science of cow-keeping. Fundamentally, by protecting the cow we realise our duty towards all living beings. But, having reduced cow service to a farce, we have forgotten our real religion."

"India possesses one-fourth of the world's cattle population. But the cattle of this country are in a worse condition than even its men and women".

"A member of the Go-Sewa Sangh should use only cow's milk and its products and leather of dead and not slaughtered cows and buffaloes."

Further, in this connection it will be pertinent to refer to some salient observations of Sir Arther Olver, the first Animal

Husbandry Commissioner with the Government of India. In his article in "Agriculture and Live Stock of India" July 1936, he observes "Investigation has shown that pure-bred cows of certain Indian breeds of cattle can, in a comparatively few years, be improved by proper feeding and management, to a point where they can compete successfully with the buffalo in economy of milk or butter fat production. In view, therefore, of the greater general utility of cows as compared with buffaloes in that they produce better working animals as well as milk and of the important fact that cows milk is a much better food, particularly for children than buffaloes milk watered down to the same level of butter fat, the question whether cows should not be bred and well fed and maintained as our she-buffaloes is one which merits careful study".

He further adds, "It is true that in many parts of India the buffalo is the milch animal but it is largely because it is easier for the milk vendor to water buffalo's milk and escape detection and because buffaloes are better able to stand the very unsatisfactory conditions under which cows are usually maintained for city milk production. Moreover, owing to mistaken ideas of food values of the different constitutents of milk, the consuming public demand so-called rich milk, i.e. rich in butter fat and pay little attention to the proteins and mineral salts, which in reality are more valuable parts of milk for human nutrition. The feeding value of standard cow's milk, i.e. milk with 3·6 per cent. butter fat is in fact far higher than that of an equal amount of cream, and it would be of great advantage to the Indian people if more attention was paid to the mineral salts and protein, which are contained in whole milk and most of which remains in skimmed or separated milk than to butter fat, which in a diet, such as most Indian diets which consist largely of starch and sugar, is not so much needed."

The following excerpt from Sri Satish Chandra Das Gupta's monumental book on "The Cow in India" may be quoted here with advantage :—

"The most astounding fact which struck me was that when we consider the vitamin value of cow and buffalo fat, buffalo ghee goes down in estimation and approaches the place of lard or other animal fats. The carotene-vitamin value of buffalo ghee is less than 2 units as compared with 21 units of the cow and these 2 units are of evanescent nature. On this consideration buffalo ghee is very inferior, The vitamin 'A' content of buffalo is almost equal to that of cow ghee. But the former being practically without the protective companionship of carotene, is likely to be largely destroyed in cooking".

The cow-dung has a special manurial value. Dr. Voelcke analysed cow-dung and found one ton of dried cow-dung to be equivalent to 155 lb. of sulphate of ammonia in its manurial value.

Incidentally, the Chairman of the Committee was told by cattle owners in the districts of Mirzapur and Ballia that they preferred the cow to a buffalo for a number of reasons.

CHAPTER III

Trend of Evidence

In dealing with the comprehensive terms of reference which embrace the entire field and the problems associated with the improvement of the cow, the Committee took advantage of and benefited considerably from the experience of both official and non-official witnesses. The former were particularly helpful in shaping the views of the Committee in regard to the administrative set up that would be feasible for solving the numerous complicated problems connected with the rearing and improvement of the cow and the possible ways and means of dealing with the old, decrepit and uneconomic cattle. In a complicated task of this nature, the views of experienced administrators are always helpful in that they lead to the formulation of a pattern that can be workable right from the village, the primary unit of our administrative set up, to the cities to which the problem extends. Various questions connected with the carrying capacity of the land, maintenance of animals, improvement of the stock, and the possible ways in which the villagers, who will ultimately have to handle the gigantic task of the uplift of the cow, can assist, were examined during the course of the discussion. As would be anticipated, there was little divergence of opinion regarding the possible approaches to the problems connected with the improvement of nutrition, scientific livestock rearing and disease control. The likely directions in which the activities of the Gaon Sabhas and Panchayats could be actively harnessed in the formidable task of the rehabilitation of the degenerated cow were discussed in detail and the main Committee as well as the Sub-Committees gathered considerable amount of valuable information from the officials in this behalf.

The problems of land management, enhancement of agricultural production, optimum utilisation of the fodder resources available in the forests and focussing of attention on cattle rearing in a manner that productive, dry and uneconomic cattle could be reared under different sets of management, was exhaustively dealt with. It was the general consensus of opinion that considerable scope existed for increasing the out-turn of food and fodder from the available land and with the increasing facilities for irrigation and better land management, it should be possible within the coming few years to considerably enhance food both for human as well as the cattle population. The incessant and

growing problem of damage to agricultural production by the ravages of stray and wild cattle and ways and means of combating it, were discussed and valuable information elicited from the official witnesses. Again, the problems of cattle rearing in different tracts of the State were examined and the handicaps which had to be surmounted in backward districts, as far as cattle improvement is concerned, received detailed attention. The role that the cattle markets, fairs and *hats* play in the economy of the cattle trade was examined and the necessity for proper regulation of this trade was emphasised. It was considered, that a proper reorientation of this trade would considerably benefit the uphill task of livestock improvement and this could be a reasonable source of income for handling this colossal task. The set up required for dealing with the unwanted and uneconomic cattle right from the villages to the Gosadans received special consideration and the agency under which this organization could possibly function in a co-ordinated manner was suggested. The various suggestions of witnesses find a place in the considered recommendations of the committee detailed later in the subject-matter of this report.

Coming to the non-official witnesses, the trend of evidence as far as the constructive aspect of the problem of the improvement of the cow is concerned, did not present any fundamental divergent views. Almost all the witnesses laid stress on the necessity of a proper scientific approach towards the basic fundamentals of live stock improvement, viz. disease control, scientific breeding and improvement in nutrition. Special stress was laid on the necessity of large-scale expansion of scientific cattle breeding activities, which included production and supply of large number of approved bulls, castration of all the scrub male stock and, if feasible, sterilization of the uneconomic female stock. Even the most orthodox school of thought did not raise any objection to a mass campaign for sterilization of uneconomic male and female animals. Likewise, there was considerable stress on the proper preservation and improvement of the fodder and concentrate resources of the country for the satisfactory rearing and improvement of our cattle wealth. One of the witnesses expressed the view that the Government of India had spent something like Rs.1,000 crores on the Grow-More-Food Campaign and about Rs.1,000 crores out of Rs.3,344 crores in the Five-Year Plan so far but very little had been spent on the welfare of the cattle. It was stressed that cattle welfare, which was the pivot of all reforms, should have advanced simultaneously and with equal speed along with other developmental measures undertaken by Government. It was the view of some of the witnesses that the problem of cattle improvement and preservation had, on account of the pre-occupation of the Government with many other important problems, like self-sufficiency in foodgrains, been neglected during the past. There was a general complaint in the country that the quality of the draught cattle was fast deteriorating and milk supply was progressively getting more and more deficient and the cultivators were not getting butter-milk even in the same quantity as before.

Another member expressed the view that the problem of cow was integrated with several other connected problems and as such it could not be considered separately. It could be appreciated in its proper perspective only if it was considered along with the question of availability and the requirement of fodder in the State. In a predominantly agricultural country like India, the importance of the cow could not be ignored as far as the requirements of the human beings as consumers of milk, agriculturists as users of work bullocks and the soil as the producer of edible food and fuel were concerned. But it was felt, that due to adoption of a makeshift land policy or, if put more mildly, lack of a rational land policy, the cow was being driven out from its proper place in our economic structure. The preservation and development of cattle should, therefore, be an integral part of the Food Production Drive. In fact, considering its vital importance, it should receive topmost priority or at least as high a priority in the campaign as any other connected subject.

A view was advocated that people with a holding of ten acres or more, should either through legislation or their own free will, leave one-third of it under trees and grass. Again an opinion was expressed that there should be complete branding and registration of cattle in the State. This approach would help in tracing the ownership of the cattle which, if found responsible for damaging the gardens or fields, the owners could be penalised for the damage done by their animals. A number of witnesses were of the opinion that anything from 1/8th to 1/10th of the cultivable land should be earmarked for the production of cattle fodder and Government should initiate earnest measures regarding fodder planning in the same manner as had been done during the past few years in respect of planning for food in the country. In the changing economy of the country, it would be desirable to persuade people to maintain cows and the producers of milk should be allotted land for growing fodder required for their animals.

Most of the witnesses expressed strong views on the maintenance of milch herds in the urban areas. They were of the opinion that this practice of drawing the best animals to the cities and maintaining them under unnatural surroundings was the most important factor responsible for the slaugther of the country's best stock after the animals went dry and were no longer capable of being maintained in the cities. The progressive elimination of the best cattle was thus leading to the depletion of quality cattle and the country's valuable cattle wealth. The obvious remedy lay in moving out the city herds to adjoining rural areas and arranging cities' milk supply from as distant rural areas as practicable. This would be beneficial both to the cow as well as the land.

During the course of the discussion the problem of cow versus buffalo was also considered. Considering the respective merits of the two animals, a view was expressed that because the cow had better potentialities of the two, it should receive extra preference and concentrated attention should be focussed on its development. The

'cow' provided both bullocks as well as milk and was, therefore, indispensable for the agricultural needs of the country. Compared with the cow the buffalo also was secondary in importance. The male buffalo was not suitable in most of the areas for work. It was not possible for the country to bank upon the tractors firstly, because they did not fit in the economy of the country and, secondly, because the country was not assured of the 'fuel' in case of an emergency.

Lastly, the question of 'banaspati' oil and its adverse effect on the cattle industry was also brought in during the course of the discussion. Many witnesses expressed strong views on the popularisation of this product and the extreme set back it was progressively causing to the rehabilitation of cattle economy in the country. There was no objection to the production of the vegetable oil as such but there was strong objection against its hydrogenation and use as an adulteraant or its being sold as 'ghee'.

A number of witnesses also laid stress on the urgency of cowdung being put back into the soil as manure by providing other fuel and also on the cow urine and bones being used as manure. Apart from the general observations referred to above, witnesses had divergent views, as would be expected in a complex issue of this nature regarding the advisability or otherwise of placing a total ban on the slaughter of cows and its kind.

CHAPTER IV

Findings and Recommendations

In the preceding Chapters a detailed account has been furnished dealing with the genesis of the Gosamvardhan Enquiry Committee, the historical background in which the problems had to be examined and the prevailing trend of opinion in the country in respect of the various terms of reference assigned to the Committee for examination and report. As stated in the introductory chapter of the report, the various terms of reference were spilt up and assigned to separate Sub-Committees whose detailed reports are attached as appendices to this report.

We shall now endeavour to deal with the subject in accordance with the terms of reference as it will facilitate easy appreciation of the connected problems, the existing position regarding the economy of the cow in this country and the task that lies ahead for the people and the State Government. Dealing with the subject-matter in this sequence, we now deal with the various terms of reference allotted to the Committee.

Term of reference no. (1) : To examine the trend of periodical variation in the population of cow and its progeny in the State with particular reference to the supply of milk and bullock power.

The first statistical information about livestock population in the available record dates as far back as 1899 and since then

census figures have been collected every five years, vide table given below :—

Year of Census	Cattle population	Buffalo population
1899	2,22,35,080	68,48,093
1904	2,39,09,512	72,81,553
1909	2,24,60,568	71,46,573
1915	2,26,02,691	77,73,352
1920	2,22,95,992	74,67,772
1925	2,26,05,991	84,39,826
1930	2,29,06,240	85,52,592
1935	2,31,77,336	92,92,216
1944	2,10,98,240	85,23,243
1945	2,17,41,951	90,56,121
1951	2,35,12,839	92,50,488

It is observed that the highest cattle population was recorded in 1904 when it totalled 2·39 crores. Subsequently, there has been rise and fall in accordance with the availability of fodder, famine conditions and the periodical ravages of diseases. The latest figures, as available in the census of 1951, reveal that there is a definite increase in the buffalo population despite the fact that no specific attention has been paid by Government to the improvement of this animal. During the interval of 47 years, to which this statistical information relates it has been noticed that there is a total decrease of 4 lakh heads of cattle as compared with the highest cattle population of 1904. This small decrease looks insignificant as this reduction in population is capable of being made good in the course of one census period. Another important noticeable feature is that there is an increase of thirteen lakh of animals in the case of bulls and bullocks between 1899 and 1951 and along with it a drop of about eight lakhs has been registered in respect of the cow population. The largest decrease in cow population, including young and working stock, has been recorded in 1944-45 which appears to be attributable to the heavy demand of army during the war years. Thus, a perusal of the available statistical information seems to indicate that the cattle population has remained more or less constant during this period of 47 years, though it is pertinent to note that the human population between 1872 and 1951 has increased from 4·26 corres to 6·3 crores.

While examining the trend of variation in closer details, it is observed that the total cattle population between 1899—1920, which is covered by a period of five enumerations, reveals an alternate rise and fall and in four successive censuses of 1920—25 to 1935—40, a small

increase is registered in the total population. This increase during the course of four censuses was not, however, enough to offset the heavy decrease of fifteen lakhs in 1909 to raise the population to the level of 1904, when it was at its peak. Again, the census of 1944 records a teep fall of 21 lakhs cattle, though, thereafter, an increase has been egistered in the census returns of 1945 and 1951. The cattle population, as recorded in 1951 census, has exceeded the total of 1935 but is still less by about 4 lakhs as compared with the figure of 239 lakhs cattle in 1904. Bullocks showed a phenomenal drop of eight lakhs in 1909, of about 3½ lakhs again in 1920 and 1·3 lakhs in 1930. These reductions were not made good in full till 1951, when an excess of about five lakhs was recorded over the previous highest figure of 1904.

As far as the cow population is concerned, a noticeable drop of six lakhs was recorded in 1909 and this tendency continued till 1944, except in 1915 and 1930, when slight increases were recorded. The census of 1945 and 1951 again showed an increase but not to the extent as would make good the previous decline in population. One of the noticeable features, however, is that the number of cows and buffaloes, not used for work or breeding, decreased from 4·38 lakhs in 1935 to 1·33 lakhs in 1945. A rising tendency in the population of such cattle (not useful for milk or work) has again been registered in the census of 1951, when these cattle have shown an increase of about half a lakh which deserves as much notice as the drop in the number of breeding cows.

Dealing with the trend of variation in the population of buffaloes it is noticed that right through, a rising trend is observed with the net result that there is a significant increase of about 24 lakhs during the course of about 47 years, though decline in buffalo population is noticed in 1909 and 1920 and again in 1944, the last of which is explained by the abnormal conditions created by the Second World War. All the decreases have, however, been made good during subsequent years. The maximum population registered in the case of buffaloes was 92·9 lakhs in 1935 which is only forty-two thousand heads more as compared with 1951 figures. The number of adult she-buffaloes has steadily increased from 32·3 lakhs in 1899 to 49·87 lakhs in 1951 which is indicative of the greater preference shown to this animal by the cultivators. Even the census of 1944, in which a sharp decline in population has been noticed in respect of all other classes of livestock, registered an increase of nearly 1·7 lakhs of she-buffaloes. The only reduction noticed in the case of this animal is in the census return of 1930 when there was a fall of about 60 thousands as compared with the preceding census. This is attributed to the heavy mortality in the Meerut and Agra Divisions resulting from the scarcity of fodder caused by the abnormal deficiency in rainfall during that period. As far as the position of working buffalo-bullocks is concerned, it is almost similar to that of the buffaloes, though there have been more frequent falls in their population at intervals. Their population in 1899 was 7·8 lakhs, whereas in the census return of 1951, it stood at 10·26 lakhs. In 1909 their

population was recorded as 6·7 lakhs which is the minimum figure recorded for this category, but at the next census that fall was nearly made up. Between 1925 and 1930, census returns disclosed a drop of half a lakh of buffalo-bullocks over the figure of 1920 but the 1935 census showed a figure of 9·1 lakhs, a peak figure which had never been reached before. There was also a fall of a little less than a lakh (·9) in 1944 but it was made up and subsequently exceeded in the returns of 45 and 51, the last census of 1951 registered a figure of 10·26 buffalo-bullocks which is the highest recorded so far. The number of buffalo-bullocks and she-buffaloes, not used for work and breeding purposes has, however, declined from 1·17 lakhs in 1935 to 28,000 in 1951.

The above observations deal with the trend of variation in the cattle population and the periodical rise and fall that occurred during the past 47 years for which the records are available. While examining the trend of cattle population it will be pertinent to observe that our State occupies a unique position in the agricultural economy of India. Out of the total population of 140 million cattle and 42 million buffaloes in the country, Uttar Pradesh alone possesses 23·5 million cattle and 9·25 million buffaloes which means that the State has about one-sixth of the total cattle population and a little over one-fourth of the buffalo population of the whole of the Indian Union.

As to the number and density of animals, it is noticed that our State maintains about 60 animals per 100 acres of cultivated area, 42 per hundred persons and 218 per square mile. The corresponding figures for Bengal are 78, 38 and 292 and Rajputana States and Ajmer-Merwara 84, 81 and 71. In Bihar, the figures are estimated at 47, 35 and 181 respectively. Dealing with the question of adequacy or otherwise of bullock power for cultivation, the following information is available. The total area of U. P. is about 72,278,809 acres of which 49,230,120 acres, including *dofasli* area, are under cultivation for production of foodgrains, fodder and other crops. It is common knowledge that the capacity of the bullocks to cover a certain acreage of cultivation depends on their efficiency as also the agricultural practice in vogue in a particular area. Presuming, however, that on an average for the whole State a pair of bullocks could be taken to cover 10 acres of cultivated area, the total requirement on bullocks for 4·92 million acres would be 98,46,000 bullocks. The latest census figures show that the total number of working bullocks, i.e. bullocks and uncastrated males over three years, kept for work only, is 1·15 crores. On the basis of these premises it would appear that as far as the requirement of bullock power in the State is concerned, theoretically there is self-sufficiency. The snag, however, lies in the fact that quite a substantial proportion of this bullock power is required for a number of other operations not connected entirely with agriculture and, again, the sufficiency of bullock power has to be judged on the basis of the efficiency of the animals. Thus, though the State may be self-sufficient, as far as numbers are concerned, a gap might exist, the extent of which is difficult to assess, due to larger demand of bullocks per 10 acres on the basis of the efficiency of the working animals

and also for meeting the other requirements which depend on bullock power. On the whole, however, it would be reasonable to conclude that there is little or no deficiency as far as the number of bullocks is concerned. What is required in a large part of the State, is the raising of their efficiency for work.

The next point to be considered is the total bullock population of the State and how it is related to the capacity of the total cow population as far as replacement of annual wastage is concerned. The total population of working bullocks including buffalo bullocks is 1·25 crores. Assuming that a wastage of 20 per cent per annum would need replacement, the total requirement per annum amounts to 25 lakhs of new bullocks. The total cow and buffalo population from which this demand has to be met is 1·11 crores. Animals maintained under Indian conditions have been observed to breed once in two years. Further, allowing for calf mortality and other accidents, it would be safe to presume that it would be possible to get one bullock from five breeding females. Thus, the total number of bullocks that would be available for replacement on the basis of this working comes to near about 23 lakhs. The gap that exists is very small and can be met from the existing stock by improving its reproductive and general economic quality. The above observations will show that as far as the requirement of bullocks and their periodical replacement, consequent on annual wastage is concerned, the needs can be met from the existing stock available within the State.

As far as the availability of milk and its relation to the trend in variation of human population and consequent demand and consumption is concerned, very little information is available on the basis of which any valid conclusions could be drawn. It is not possible, therefore, to assess the progress or decline in respect of the total availability of milk and the position regarding *per capita* consumption. The only observation that can be made in this behalf is that with the progressive decline in the quality of cattle, production has not kept pace with the requirements. Some relevant information in this connection is available in the report of Dr. Norman C. Wright in which the *per capita* consumption in various States in the Indian Union in 1937 is recorded as follows :—

Milk production and consumption by provinces

Province	Daily production per head *	Daily consumption per head †
	Oz.	Oz.
Assam	1·4	2·2
Bengal	3·1	1·9
Madras	3·6	1·6
Bombay	4·7	4·0
Uttar Pradesh	4·7	5·0
Central Provinces	6·1	0·8
Bihar and Orissa	6·4	3·2
Punjab	18·3	9·9

(* Provincial Marketing Surveys.
(† Sir John Megaw's figures.)

For the sake of comparison and bringing out clearly the unhappy position regarding inadequacy of production and consequent consumption of milk, the estimated total production of milk and consumption per head of 20 countries is given below :—

Estimated total production of milk, and estimated production and consumption per head (*)

Countries	Total production of milk 1930—34	Daily production per head of population	Daily consumption per head (†) of population
	(Million gals).	Oz.	Oz.
Newzealand	870	244	56
Denmark	1,200	148	40
Finland	620	74	63
Sweden	980	69	61
Australia	1,049	69	45
Canada	1,580	66	35
Switzerland	607	65	43
Netherlands	970	54	35
Norway	290	45	43
U. S. A.	10,380	37	35
Czechoslovakia	1,200	36	36
Belgium	651	35	35
Austria	545	35	30
Germany	5,096	34	35
France	3,150	33	30
Poland	1,900	27	22
Great Britain	1,474	14	39
Italy	1,050	11	10
Rumania	382	9	9
India	6,400‡	8	7

*The first and third columns are taken from the Problem of Nutrition, Volume IV, Statistics of Food Production, Consumption and Prices (League of Nations Publications). The second column is calculated from the figures in the first column as compared with the population of the country.

† Includes both liquid milk and milk products, expressed in milk equivalents.

‡ Assuming India's total production to be 800 million maunds.

The above figures tell their own story and indicate the vast leeway that has to be made in regard to the enhancement of production per animal as also the *per capita* consumption of milk in the State.

In the preceding observations, a brief account has been furnished of the trend of periodical variation in the population of cow and its progeny in the State and attention has been focussed on the salient features noticed in the trend of population since 1899. For a more detailed study of this problem, attention is invited to the note titled "Trend of cow and buffalo population in U. P. (1899—1951)" prepared by the Secretariat of the Gosamvardhan Enquiry Committee, which is appended to the report of the Cattle Nutrition and Dairy Sub-Committee (Appendix IV). The comprehensive note shows the progressive trend of population during the period reviewed in this discussion and also the rise and fall in population of the cow and its progeny and its comparison with the total buffalo population in the State. Further, the position regarding the availability of bullock power within the State has been examined, as also the problem of the replacement of annual wastage. A study of this nature provides a mass of valuable information regarding the total cattle population in the State and its relation to agricultural requirements.

Recommendation—Though the specific term of reference only necessitated an objective examination of trends of cow population, the Committee feels that such studies would be of considerable value in future also and, therefore, recommends, that at the time of each quinquennial census, detailed examination should be made of the trend of population of different classes of livestock and the position regarding each district should be carefully assessed. This type of study, which should be quite feasible with the available staff of the Agriculture, Animal Husbandry, Revenue and Planning departments, will indicate, at the end of every five years, how the population of different classes of livestock is progressing and how its rise or decline is likely to affect agricultural production or the balance between land, plant and animal. Such analysis will be of considerable assistance in periodically assessing the particular trends and the application of appropriate corrective measures as and when necessary.

Term of reference no. 2: To examine the problem of improvement and preservation of the cow in the context of available nutrition and our fodder resources.

The State of U. P. possesses, besides other classes of animals, 32·7 million cattle and buffaloes. When the other classes of animals, which subsist on shrubs, scrub jungle, tree leaves, etc. are not considered, the scientific requirement for total cattle population comes to 84 million tons of dry matter, 3·9 million tons of digestible protein and 79,181 million therms of energy. Considering that this much provision of nutritional requirement, which is based on the western standards, and is rather lavish, if the demand is reduced for our low-sized village cattle, it works out to 58·8 million tons of dry matter, 3 million tons of protein and 61,762 million therms of energy. Again, under Indian conditions, appreciable economy can be effected in maintenance

need of animals without possibly impairing their efficiency. The requirement could, thus, be further reduced to 47 million tons of dry matter, 2·1 million tons protein and 45,303 million therms of energy, which is regarded as the critical limit, below which the animal would have to subsist on its own bodyweight. This is actually happening at present and accounts for the progressive degeneration of the cattle.

The different sources from which demands of cattle feed are met, are residues left over after harvesting and threshing of food crops, vegetable and sugarcane tops, by-products of foodgrains, produce of the forest and fallow land and the limited fodder crops grown for cattle. When the total availability from all these sources is calculated on the basis of estimated yield of different crops, it is seen, that 29 million tons dry matter, 0·6 million ton protein and 16,686 million therms of energy are available. On the basis of this availability, the gap that remains to be filled is 18 and 1·5 million tons of dry matter and digestible protein respectively and 28,617 million therms of energy, even when the requirements of the animals are to be met at the estimated critical limit. In other words, if the position is studied in terms of provision of balanced concentrate mixture to animals for production and green feed for maintenance, 239 lakh tons straw, 661 lakh tons green feed, 330 lakh tons of green feed from grazing and 56·7 lakh tons concentrate mixture composed of oil-cakes, grains and by-products are needed. The available supply leaves a gap of 22 per cent straw, 66·1 per cent green feed from cultivated crops, 41·1 per cent green feed from grazing, 84·7 per cent oil-cakes, 51 per cent maize, 87·7 per cent cotton seed and 31·9 per cent bran. Expressed in still simpler language, the requirements of a mixed population of 32·7 million heads of cattle can be taken as representing 27·13 million adult units. With the present available supply of straw, green feed and concentrates, these adult units cannot be fully fed. When bulk is provided in full along with minimum low protein requirement, the available supply can support only 159·2 lakh adult units leaving 112·1 lakh units unfed. Fifty per cent increase in agricultural production will support 62·9 lakh extra units ; while fodders grown on *kharif* fallow and late paddy area, together with scarcity feeds, can maintain another 32·7 lakh units. The remaining 16·5 lakh units cannot be fed unless more land is brought under fodder cultivation or availability from grazing area is proportionately increased. With an increase in cattle population and better prophylactic treatment against contagious diseases, the trend of population will be towards an increase and the deficiency in nutrition will become still more pronounced, if no attention is paid urgently towards the production of more fodder from cultivated land and utilisation of all marginal and sub-marginal land for augmenting food and fodder sources. Simultaneously, attention will have to be devoted to the utilisation of all scarcity fodder and feeds which are wasted at present and also to avoidance of wasteful practices in cattle feeding. Incidentally, during the year 1951-52, the area under fodder crop was 1,787,200 acres only, i.e. 3·6 per cent of the total cropped area.

The problem of cattle nutrition can be better appreciated when it is discussed under the major heads which form the main sources of supply. These could be examined under (i) fodder and concentrates available from agricultural production ; (ii) fodder supply available from forests ; and (iii) utilisation of scarcity fodder and feeds.

(i) *Fodder and concentrates available from agricultural production*— In discussing this source of cattle nutrition, it would perhaps be helpful to understand how food is produced both for men and animals, growth of plant depends on the proper use of sunlight which reacts on the green matter (chlorophyl) available in the leaves. The synthesised food is carried to different parts of the plant and growth ultimately takes place, wastage of the sunlight which is available in abundance in this country means loss of food. Agricultural practices have, therefore, to be reorientated on this principle and with the objective of the maximum possible utilisation of light for better and quicker growth of plant life. Proper appreciation of this phenomenon of food production, both for men and animals, is therefore, necessary to understand the vital problems of plant protection and utilisation. Next comes the question of proper land utilisation with the object of deriving the optimum benefit from the land. For this, good seed, manure and irrigation are the acknowledged essentials. A concerted drive has been launched during the past few years on saturating the whole State with quality seed which, when accomplished, will by itself assist in enhancing production. Simultaneously, there is an all out drive for harnessing the available water resources and thereby augmenting irrigation facilities. As to the problem of providing more manure for the land, ways and means are being evolved to utilise all that is available from cattle and to supplement it by artificial manures and large-scale introduction of the practice of green manuring. With this multi-pronged attack, efforts are in progress all over the country to improve the phenomenal low yields of food and fodder. In due course of time, it is reasonable to anticipate that the land—which is capable of yielding much more than what it has been giving for decades past—will itself improve and yield reasonable production which would satisfy both human as well as cattle needs. With the growing demands of the increasing human population, more and more land is being brought under cultivation. Along with the production of foodgrains, this effort will lead to the increase in fodder production also. It is true that with the decrease in area under " pastures " on account of marginal and sub-marginal land being brought under cultivation, the facility for free grazing is being progressively restricted. On the contrary, it is observed that the production of fodder, when land is brought under cultivation, is comparatively better than when the land is left fallow as the pressure of cattle on such land leaves very little of grazing and the area becomes more of an exercise ground than a productive pasture. Though some area is always necessary in a village or a group of villages to provide a standing or exercise ground for the cattle, leaving of large area of land, uncared and uncontrolled, for grazing of cattle does little good to the cattle or cultivation. Such areas progressively deteriorate and are ultimately of no economic

value. Extensive reclamation of marginal and sub-marginal land for agricultural production should, therefore, ultimately benefit the country both from the point of view of grain production as well as larger yield of fodder. Wherever pastures are left as a matter of policy for cheaper rearing of stock and also for movement and exercise of cattle, it is again essential that such areas should be properly controlled and managed so as to produce in a specific area of land, many more blades where one grew before. Leaving of these areas entirely for the incessant and uncontrolled grazing and movement of cattle, without any attention to preservation and improvement of fodder, will not mean a satisfactory utilisation of land as a long range policy. In any policy of agricultural production, therefore, attention has to be paid to the production of more grain and fodder from the existing land and in this process, adoption of that practice of crop rotation which is capable of yielding the optimum quantity of grain and simultaneously more fodder for maintaining both the human as well as cattle population. Again, a proper balance needs to be maintained regarding utilisation of land for production of green fodder and cash crops. If this balance is disturbed and with a view to secure maximum and quicker return, attention is devoted to cash crops alone, it can only be at the expense of human and cattle needs. Further, a proper rotation of crops, which *inter alia* includes leguminous crops and practice of green manuring, is admittedly necessary for maintaining the fertility of the land. In our own State, *sanai* cultivation is undertaken during monsoon. The cost works out as Rs.10 to Rs.15 per acre but means no immediate returns though from the point of view of subsequent yield, the practice is found very economical. On account of the cost involved and lack of prompt returns, only bigger farmers have adopted this practice of green manuring and average poor farmers have not been able to adopt it to any appreciable extent. During the past few years, appreciable work had been done in respect of *moong* no.1, a legume crop, which provides food and fodder and simultaneously enriches the fertility of the soil. The yield is anything from 6 to 16 maunds of grain. The per acre yield of green fodder from this crop, which can be grown in two months, i.e. July and August, is 20 to 25 maunds per acre. Substantial acreage is now being put under Moong during monsoon. There are some other legume crops on which work is in progress and if these short-term crops can be introduced in the agricultural practices in the State not only will they enhance the fertility of the soil but also provide grain and fodder for meeting the human and cattle needs. No new land is required for increasing food and fodder through these practices as they can be well fitted in the existing rotation of crops. It will be seen, therefore, that such innovations will materially assist in increasing the returns from land. Summarised in a nutshell, therefore, improvement in agricultural production by adoption of methods which lead to higher yield of grain and fodder and also introduction of short-term crops which lead to the enhancing of fertility of the soil and simultaneously provide more grain and fodder, provide an answer to the problem of meeting the deficit in food produc-

tion both for man and animals. Coupled with this, utilisation of the available large areas of fallow, marginal and sub-marginal lands and provision of better seed, irrigation and manure facilities, extend considerable scope for enhancing production of food and fodder. This brings one back to the principle which was enunciated right at the beginning of this paragraph. It was emphasised therein that all plants grow on a compound interest law. In other words, where four leaves are present today, the same plant is capable of yieding five the next day. All that is necessary is to conserve them with a view to ensure optimum production and rational utilisation. The present tendency of indiscriminate grazing affords little chance to the plant to grow, with the result that it is not possible to get even the capital from the land, leave alone the compound interest. This wasteful tendency has, therefore, to be counteracted if any progress has to be achieved in the effort of providing more food for man and animal by proper utilisation of the land. Constant and effective propaganda is necessary to focus attention on the benefits of judicious adoption of scientific restrictions on grazing which will ultimately benefit both the individual as well as the community. As far as agricultural production is concerned, stress has to be laid on scientific and balanced utilisation of the land for meeting the needs of the growing human and cattle population and along with it to the preservation and proper utilisation of the food resources provided by nature from uncultivated land and forests so that a given area can produce much more than it is doing today and is thus capable of maintaining many more cattle.

Cattle problem is just like human problem and intimately correlated with it. Steps taken by Government to raise more food will naturally have an impression upon this problem. In consequence of zamindari abolition measures, large areas of land have vested in Gaon Sabhas. The Committee learnt that it was contemplated to establish planned cultivation in the area outside the 'holding'. The intention is to limit cultivation so that there is vacant land available for pastures. It is felt that we have overdone cultivation. There should be a balance between 'cultivated' and 'uncultivated' area. Some area must remain without cultivation, not for rotation, but just to keep land free from cultivation so as to maintain and promote cultivation itself. Measures to stop indiscriminate cultivation, which are now receiving the attention of State Government, will, in course of time, have an impression upon the population of cattle. The Committee was further informed that a 10 per cent limitation in available land had been laid down for pastures and inter-related subjects, with the ultimate object of ensuring cattle welfare. Cultivation had so much increased in some villages that even this 10 per cent land was not available for fodder crops and there was great difficulty in procuring extra land. However, holdings would have to be controlled to maintain a balance between cultivation and for further breaking of land on a planned basis. As far as the question of improvement of pastures is concerned, it would gain momentum if this is co-related

with the tree plantation drive and taken up on a State-wide scale in the same manner (and in the form of a movement) just as is the case at present in regard to the drive for food production and planting of more trees.

(ii) *Fodder supply available from forests*—While examining the possibilities of grazing facilities in the forests, available information shows that during the financial years 1951 to 1953, the number of cattle allowed to graze by the State Forest Department at full rates, at concessional rates or free of charge was 18,93,400, 18,11,507 and 20,25,638 respectively. The total area of the State-managed forests is as under :

1.	Waste land	12,46,614
2.	Government reserved forest	61,12,816
3.	Private forests	10,25,087
	Total ..	83,84,517

From the point of view of availability of fodder, forests could be classified as :

(i) Dense forest, where available grazing is very poor.

(ii) Open forests (savanah grasslands) where new shoots are available after burning of grass.

(iii) Dry arid zone of Bundelkhand, Jalaun, Agra, Etawah, Mathura, which have not been fully developed so far.

As far as grazing in the forests is concerned, cattle usually graze within an area of 3 to 5 miles on the periphery of a forest block, the rest of the area, which will approximately be 20 to 25 per cent of the total area, is not accessible to grazing either because of the density of forests, infestation with wild animals, swamps or prohibition against grazing for protection of the growing forests. The grazing capacity of two acres of forest area is one unit—cow is taken as one unit and buffalo as two units ; goats and sheep make ½ unit each. Out of the total forest area, including vested forests and waste land, which totals 12,674 sq. miles, only 1,521 sq. miles is closed to grazing. From the evidence available to the Committee, it appeared that considerable scope existed in regard to the improvement of grazing facilities in the forests as also production of large quantities of grass by proper methods of preservation which could subsequently be cut and supplied to meet the needs of the cattle. For this purpose, it is necessary to give high priority to the problem of development of pastures in the forests.

Considerable scope exists for research by the Forest Department on the possibilities of indigenous and exotic grasses. The Committee gathered that if contour trenching and closures from grazing could be arranged, considerable improvement could be effected in respect of fodder production, which at present was the most serious problem facing the preservation and improvement of cattle. In this connexion, the Committee gathered that there was ample scope for spreading 'Anjan' grass (a valuable and nutritious fodder) in the forest areas. Further, plantation of fodder trees, such as, *Kachnar*, *Asna*, *Pipal*, *Gular*, *Bargad*, etc. which yield both leaf as well as fruit fodder had considerable scope for extension. Regulated lopping of such trees could supplement the available fodder from the forests.

Again, the Committee learnt that even under the present conditions, there was possibility of storing large quantities of grass, which if cut at proper time and stored as hay, would provide valuable fodder for large number of animals. It was estimated that about five lakh maunds of hay could be available by this means. In this connection, the problem of cutting, storing and economical transport of hay to needy areas or providing of cattle camps for dry and unproductive stock at suitable places near the available fodder, needs to be properly explored. Another possible method of enhancing fodder supply, which is already engaging the attention of the Forest Department, is the proper management of canal banks. Plantation of trees along canal banks has been already undertaken and such plantations are closed for grazing for five years. Suitable grasses could be grown in these areas and grazing blocks established along the canals. 'Anjan' grass, which can be grown without irrigation, can be quickly spread in these areas and many other nutritious grasses, including perennial legumes, could be propagated and supply of nutritious fodder from this source considerably enhanced. Likewise, *Musel* grass could be spread with advantage in the Bundelkhand area. Suitable areas in forests could also be utilised for growing of nutritious fodder crops, e.g. *lobia, paragrass, napier* and even *berseem.*

As area of 19,000 sq. miles of private forests has vested in Government after the abolition of zamindari and of this, 3,200 sq. miles had vested in the Forest Department and the rest in the Gaon Sabhas, there is immense possibility of utilising these areas for plantations as well as production of fodder. By adoption of a systematic plan, which would include closure of plantations and improvement in the fodder production capacity of the closed areas, good deal of headway could be made for meeting the fodder needs of the adjacent areas. It was brought to the notice of the Committee that 20 lakh acres of land had become barren due to erosion in Ballia, Ghazipur, Jaunpur and Azamgarh districts on account of improper use of land, uncontrolled cultivation and absence of provision of terracing on the slopes. Attention to these extensive areas of neglected land will, in due course, help in providing more food, fuel and fodder.

Further in remote forests and deeper jungles, grass was not being fully utilised. If arrangements could be worked out for the shifting of the useless and uneconomic cattle to these areas, the grass available at present could be satisfactorily utilised and the pressure of uneconomic cattle in areas, where grass is required for productive animals, could be appreciably reduced.

The available information shows that the total income from grazing fees in forests from the whole of U. P. was Rs.2,29,000 in 1952-53. The rate of grazing fees varied from one anna to Re.1-8 per head per annum. Apart from this, Government remitted grazing fees to the tune of Rs.11,94,000 in the shape of free grazing. In this connection, a view was expressed that permission for free grazing should be stopped and instead "economic rates" should be charged. An examination of the existing facilities seems to suggest that a specific policy has to be laid down by Government in regard to grazing in

forest areas, with particular reference to the rates prescribed at present and also the question of free grazing facilities. The vital and pressing problem, however, is the improvement of grazing in the whole length and breadth of the forest area, wherever conditions permit and the handling of this task in a satisfactory and effective manner. Perhaps in the dense forest areas, it will not be possible to do anything substantial in this direction. However, large tracts in the forests seem to afford extensive scope for improvement of the pastures and if the problem of improving the nutrition of cattle has to be taken up in an effective manner, all such areas need effective, urgent and large-scale attention. Top priority has, therefore, to be given to the development of pastures and for this purpose, funds have to be provided to the Forest Department. Little or no work has till now been done on this particular aspect of the problem of cattle nutrition and there appears an urgent need for the establishment of a section of Agrostology, which would devote attention to improvement of pastures all over State, including the forest areas. In this task, there should be an effective and close collaboration between the Forest, Agriculture and Animal Husbandry Departments.

Lastly, the Committee gathered that with a little effort it should be possible to secure 4 to 5 lakh acres of open areas in the forests for the establishment of concentration camps for maintaining uneconomic and decrepit cattle. If those areas could be suitably fenced at the cheapest possible cost, the congestion of unwanted cattle could be relieved and progressively as the cattle in these camps get reduced due to natural deaths, their place could be taken by more cattle from other areas. This approach seems to be the only possible way of reducing the pressure of uneconomic cattle witnessed at present in the cultivated areas.

(iii) *Utilisation of scarcity fodder and feeds*—Having dealt with the two main sources of cattle nutrition, the other source that remains to be tapped and has not received attention so far is the utilisation of scarcity and unusual feeds in the rations. By utilisation of these products the shortage of concentrates can be reduced to some extent and some bulk can also be provided to meet the deficit in cattle feed. Considerable amount of work has been done on this subject during the past few years at the Animal Nutrition Section, Izatnagar. It has been shown that a number of articles, which go waste at present, such as Jamun seed, mango kernel, Babul pods and likewise many grasses which, with maturity, become coarse and are not eaten by the cattle, can, if properly processed and preserved, be used as cattle feed. A list of these sources of supply, which can help in reducing the deficit in animal nutrition is given in Appendix XIII. It is estimated that about 1,46,400 tons of Jamun seed and 12,500 tons of mango kernels can be collected in Uttar Pradesh only. If economical methods of processing these seeds and kernels, which are wasted at present can be demonstrated and popularised, appreciable headway can be made in providing for the needs of the cattle. Likewise, another feed, which has recently come into vogue, is *urea* which can be

introduced to the extent of 3 per cent in a concentrate mixture without any harmful effect. Again, attention to proper utilisation of what is available is itself very important. Proper chaffing of fodder and its processing provides better nutrition and, at the same time, saves the colossal waste which takes place in the feeding of cattle in any parts of the State. Quite a lot of waste occurs in the use of *Kadbi* straw due to improper chaffing and processing before it is fed to cattle. If this loss could be saved, it would lead to quite an appreciable efficiency in the feeding of cattle and providing of bulk fodder for a much larger number than is the case at present. In view of the acute shortage that is experienced all over the State, every approach, which helps in the proper collection, storage and processing of the available feeding stuffs, needs attention. In this context, the vital need for the utilisation of the scarcity feeds which can reduce the requirement of concentrates to some extent and also supply bulk, needs State-wise attention. Extensive work on these sources of supply, the demonstration of methods as to how they can be economically used and how they can help in improving the general nutrition of the cattle, needs to be undertaken. If this colossal task could be effectively handled, it would open enormous potentialities for materially overcoming the deficit in cattle feed experienced in many parts of the State today.

In the above paragraphs, we have dealt with the various sources from which nutrition for cattle is derived and ways and means of enhancing production to make up for the huge deficit which is noticeable at present. The recommendations under the three heads dealt with above area now briefly summarised as follows :

1. *Recommendations*—The time has come when a definite agricultural policy has to be laid down for the whole country. This has to be done on an all-India basis as well as the State levels. In laying down this policy, specific attention has to be devoted to the relationship of soil, plant, man and animal. A system of balanced agricultural rotation has to be formulated for the whole country keeping in view the requirement of cereals, fodder and cash crops. In this plan, human and animal requirements have to receive priority consideration.

For providing the requisite momentum and focussing attention on increased fodder production, a State-wide movement for increasing fodder production should be organised on the same basis as is being done at present in respect of Grow-More-Food Campaign and *Vanmahotsava*.

2. Agricultural practices have to be reorientated with a view to lay emphasis on growing of crops that yield more grain and also more fodder quantitatively as well as from the point of view of superior nutrition.

3. The present low yields of foodgrains per acre have to be increased with a view to provide more food for human population and also extra fodder for cattle. This should not be difficult in view of better irrigation and other facilities necessary for enhancing agricultural production.

4. All fallow land should be progressively brought under fodder cultivation and steps should be taken to introduce superior grasses in the common village pastures and forests.

5. With the progress in the consolidation of holdings, common pasture lands should be developed and controlled, grazing should only be permitted with a view to maintain the productivity of the pastures. Indiscriminate use of these pastures will reduce them to mere exercise grounds and convert them into barren or *usar* areas.

6. There is vast scope for proper utilisation of the monsoon fallow which is estimated to be about one crore acres. Apart from yielding valuable *moong* and *lobia* grain for human consumption, systematic utilisation of this area, during the period it lies fallow, will enhance its fertility and also provide approximately 25 maunds per acre of fodder. These leguminous crops, which occupy the fields during July and August only, will thus provide more grain as well as fodder and permit cultivation of the land during September and October for *Rabi* sowings. Likewise, in paddy areas, introduction of suitable legume crops such as *berseem*, *lucern* etc., should be popularised. Apart from enriching the fertility of the soil, this practice will provide more nutritious fodder after the main crop has been harvested.

7. Availability of fodder can be enhanced by proper utilisation of 30,00,000 acres of ravine land by its systematic protection and rotational grazing after the grass has been allowed full scope for growth.

8. The area of culturable waste land in the State is estimated to be 95,00,000 acres. This land is available mostly in the *Tarai* area as well as the *usar* tracts in the State. Systematic exploitation of this land would ensure additional availability of fodder at the rate of at least 15 maunds per acre.

9. With the progressively increasing availability of better seed, fertilizers and irrigation facilities, an additional increase of fodder in the form of crop residues (*bhoosa*) can be reasonably anticipated. Even a conservative estimate would put this additional production at 20 per cent. over the present availability.

10. Cultivation of fodder crops should be progressively encouraged. Barring small holdings, which present obvious limitations, owners of bigger holdings, say over ten acres, should, by persuasion as well as by legislation, be made to allot 5 to 10 per cent of the land for growing of superior fodder crops.

11. In order to encourage the production of fodder crops, irrigation facilities should be provided either free or at nominal concessional rates.

12. The practice of silage production should be encouraged. All Village Level Workers, including the staff of the Revenue Department, should be trained in this work so as to enable the process to be spread all over the State.

13. The *Vanmahotsava* drive should include plantation of trees which provide timber, fuel and fodder. Regulated lopping of fodder

trees should be permitted to supplement the food requirements of cattle.

14. Extensive use of grasses, leaves and shrubs which are not used as cattle feed normally but can be converted into suitable and economical cattle food by processing as shown by the work done at the Indian Veterinary Research Institute, Izatnagar, should be popularised and the methods of utilising them should be made known to the villagers through the staff of the Development Departments.

15. Some legumes and grasses can be grown under the shade of trees in the orchards. Extensive areas under *deshi* mangoes, mahua and other trees can be utilised for growing of fodder. With a view to encourage fodder production in growing or well-established orchards, the possibility of partially exempting such lands from agricultural income-tax should be explored.

16. A suitable plant costing nearly about Rs.250 suiting village conditions has been adapted by Sri Satish C. Das Gupta for utilising cow-dung for production of gas for cooking. It is stated that there is no loss in quantity or quality of the resultant manure and in fact in many respects it is found better than the composted cow-dung. It is strongly recommended that experimental trials should be undertaken with this plant and as soon as its efficacy is proved, arrangements should be made to popularise it in villages through the agency of Community Projects, National Extension Service Blocks and Gram Panchayats. If successful, this practice will solve the problem of fuel in the villages and make all the cow-dung available for enriching the fertility of the soil.

17. The collection of scarcity feeds like Jamun seed, mango kernel, *neem* seed and use of unusual feeds like *urea* should be encouraged to supplement the deficiency in nutrition. Work in respect of the utilisation of Jamun seed, mango kernel and *neem* seed should be popularised through Gaon Sabhas and Cottage Industry Organization.

18. All wasteful practices in the utilization of available fodder should be avoided. For this purpose constant propaganda is necessary for proper chaffing and processing of fodder before feeding it to the cattle. Large scale introduction of chaff-cutters is, therefore, necessary and should be popularised.

19. Extensive work has been done on the proper utilisation of paddy straw as cattle feed. It has been shown that simple washing of the straw makes it more palatable and increases its nutritive value by about 25 per cent. This practice of washing paddy straw before feeding should be popularised in all the paddy areas.

20. Constant and effective propaganda is necessary to focus attention on the benefits of judicious adoption of scientific restrictions on grazing which will ultimately benefit both the individual as well as the community.

21. The practice of using oil-cakes as manure should be strictly prohibited and all oil-cake should be utilised for feeding of cattle. Only

such oil-cakes as have no feeding value for cattle should be utilised for manurial purposes.

22. For dealing effectively with the vast field of animal nutrition and effective utilisation of fodder and concentrates, there is an urgent necessity for the establishment of a full-fledged animal nutrition section under the Animal Husbandry Department.

23. There is vast scope for utilising the existing resources of fodder available in the forest areas. This can be done by processing the available grass as hay or silage or by making arrangements for its utilisation by locating dry and uneconomic stock in the forest area itself.

24. Remote forest areas, inaccessible to productive cattle, should be utilised for maintenance of uneconomic cattle. This will enable utilisation of fodder which is being wasted at present.

25. Extensive work needs to be undertaken in regard to the improvement of grazing in the promising forest areas. Arrangement should be made for large-scale trials, both in respect of indigenous and exotic grasses, with a view to assess the maximum possible productivity of the land in respect of fodder production. There is ample scope for spreading *Anjan* grass (a valuable and nutritious fodder) in the forest areas. Its large-scale spread should receive urgent attention.

26. In areas that are being newly afforested, whether for control of erosion, march of desert or any other purpose, arrangement should be made for extensive plantation of such trees whose leaves and pods can be utilised for the feeding of cattle.

27. Work on plantation along canal banks is already being undertaken. Along with this, arrangement should be made for spread of *Anjan* grass which can be grown without irrigation and also such perennial legumes which will thrive in these areas and can provide nutritious fodder for animals. Likewise, *Musel* grass can be spread with advantage in the Budelkhand area. Again, suitable areas in forests and also along canal banks should be utilised for growing of nutritious fodder crops, e.g. *lobia, paragrass, napier* and even *berseem.*

28. Provision for free grazing in the forest should be progressively discontinued and economic rates should be charged for all classes of livestock with a view to improve the grazing facilities for quality stock.

29. Little or no work has been done so far on improvement of pastures. An Agrostological section to deal with this vast problem, therefore, needs to be established in the State at an early date. It should be run in close collaboration of Agriculture, Forest and Animal Husbandry departments. This section should devote attention to the improvement of pastures in forests as well as the villages. It should also provide information regarding high yielding fodders and nutritious grasses.

30. Till now, no facilities or funds have been provided to the Forest Department for attending to the problem of pasture improvement. It should be recognised that forests have to cater for timber, fuel and fodder. For attending to the problem of pasture improvement and thus making large quantities of fodder available for cattle, which appears to be within the competence of the Forest Department, adequate funds and requisite staff is necessary. Early provision should, therefore, be made for providing a special officer with requisite staff for attending to this important problem and necessary funds should also be provided for taking up larges-cale work on improvement of pastures in the forests, which afford extensive scope for enhancement of fodder production.

Term of reference (3): The problem of stray and wild cattle as also the maintenance and economic utilisation of old, decrepit and unproductive cattle and the possibilities of utilising institutions like the Gaushalas and Gosadans for the purpose.

This term of reference can best be discussed under the following headings :—

(*a*) Present position about cattle slaughter,

(*b*) Unlicensed slaughter houses,

(*c*) Goshalas,

(*d*) Stray, wild, old, diseased and uneconomic cattle,

(*e*) Gosadans,

(*f*) Cattle markets, and

(*g*) Carcass utilisation.

(*a*) *Present position about cattle slaughter* :—For decades past, our system of cattle rearing and its attendant economics have been proceeding on a disorganised basis which presents a number of obvious paradoxes. Whereas the population at large, holds the cow as an object of veneration, it is noticed that, partly due to ignorance and partly due to reasons beyond its control, even essential principles of livestock improvement are not attended to. This feature, which has led to the present state of deterioration, has been dealt with thoroughly in a previous chapter dealing with the historical background of livestock development. An obvious sequelae of this haphazard system of cattle rearing and a *laisse-faire* attitude towards our cattle population has naturally led to the production of good, bad and indifferent quality of stock, accordingly as the cultivators of different areas have been able to pay attention to the improvement and needs of their stock. With a large population of animals, in which the majority is not yielding adequate and prompt returns to the owners, the animals are allowed to fend for themselves and to subsist on whatever the agriculturist is able to provide from his resources for the maintenance of his stock. Naturally, therefore, the problem of a substantial percentage of uneconomic cattle has cropped up and along with it that of stray, wild, old, diseased and uneconomic animals. In our

particular economy many of the animals which would be considered uneconomic from a strictly utilitarian point of view are not regarded as such because they cost their owners very little in maintenance and during their span of life, provide manure for fields and after death some return in the shape of hide, bones, etc. Even so, some of these animals, which the farmer feels, are a burden on him, find a way to the slaughter houses, either by direct sale to the butchers or through intermediaries.

In dealing with the trend of slaughter of cattle during the past 18 years, i.e. between 1936-37 to date and the various measures taken from time to time to regulate the slaughter of cattle, the assessment can be based only on the limited information available from the record of slaughter of cattle in recognised slaughter houses. The substantial amount of slaughter that takes place outside the licensed slaughter houses cannot be gauged with any degree of accuracy. As far as the recognised slaughter houses are concerned it is noticed that the number of cattle slaughtered after the year 1946-47 has been very insignificant. Statistics collected from the various Municipal Boards, District Boards, Notified Areas and Cantonment authorities bear out the veracity of this statement. From an examination of these figures it appears that the slaughter of cattle has varied ; the maximum figure recorded being 142,237 heads of cattle slaughtered in 1937-38. From 1940-41, a definite downward trend is noticeable so much so that during the years 1942-43 and 1943-44 there has been a steep decline and subsequently from 1947-48 onwards the decline has been still steeper. The previous decline recorded for the period 1943-44 to 1946-47 seems to be related to the high cost of animals during that period and also to certain restrictions imposed by the State Government on the slaughter of certain types of cattle such as milch and pregnant cow, cattle with calf at foot, cattle below ten years of age and other categories of cattle fit for breeding. The figures of slaughter for meeting the army requirements, which was quite a heavy strain on the cattle population, are not available. The drop noticed from 1947-48 onwards, seems to represent the trend of public opinion against slaughter of cattle during the post-independence period with the result that the number of cattle slaughtered in recognised slaughter houses in 1951-52 dwindled to 2,704 and 2,733 respectively. On the contrary, there is no reliable information available for this period regarding the extent of unauthorized slaughter which took place to offset the seemingly low figures registered for the recognised slaughter houses. It is, however, common knowledge that quite a lot of clandestine slaughter was resorted to in unauthorised premises during this period when the known figures of cattle slaughter have been at their lowest ebb. This fact is borne out by the investigations of the Cattle Economics Sub-Committee (Appendix VI) which paid surprise visits to a number of districts to gain first-hand information regarding the amount of unauthorised slaughter that was being carried out in private premises. Whatever protection was, therefore, afforded by public opinion against the slaughter of cattle, which has necessitated most of the Municipal Boards, District Boards, Notified and Town Area Committees to pass by-laws banning slaughter of cow

and its progeny has to some extent been counteracted by quite an appreciable amount of slaughter that has taken place in unauthorised premises. The figures of slaughter of cattle at the various recognised slaughter houses further show that in the year 1952-53, calves were not slaughtered anywhere, cow slaughter has been continuing at only one slaughter house in the State and bullocks were slaughtered in five slaughter houses in different districts. Thus, as far as the question of open slaughter of cows and its progeny is concerned, the figures have dwindled considerably and no problem exists as far as slaughter of cow and its progeny is concerned. Most of the local bodies have already banned slaughter of cattle and as matters stand, the problem of uneconomic and unwanted cattle even now faces us in all its seriousness.

Apart from the sentimental aspect of the problem, it is stated, that reduction in the slaughter of cattle has adversely affected the hide trade as the number of slaughtered hides which were more in demand, has decreased correspondingly. A scrutiny of figures of slaughter reveals, that simultaneously with the decrease in the slaughter of cows and its progeny, there has been a corresponding increase in the slaughter of buffaloes in the recognised slaughter houses. The number of buffaloes slaughtered in 1936-37 was 1,20,030 whereas in 1952-53 the number increased to 2,55,812. Thus, along with the reduction in the slaughter of cows, a compensatory increase has been noticed in the slaughter of buffaloes. In this connexion, the information available regarding the total number of cow-hides dealt within a prominent hide-trading centre in the State, during the last nine years, is given below :—

Year	Total number of cow hides available	Index	Good quality hides available		Inferior quality hides available	
			Number	percentage of total	Number	percentage of total
1945 ..	7,98,900	100	6,98,100	87·5	1,00,800	12·5
1946 ..	11,36,700	142	7,64,000	67·2	3,72,700	32·8
1947 ..	8,20,900	102	5,08,200	62·0	3,12,700	38·0
1948 ..	7,58,300	95	5,71,000	75·3	1,87,300	24·7
1949 ..	7,34,600	92	3,92,700	53·5	3,41,900	46·5
1950 ..	6,69,400	84	4,44,500	66·4	2,24,900	33·6
1951 ..	9,83,300	123	7,02,000	71·3	2,81,300	28·7
1952 ..	7,36,700	92	5,34,600	72·9	2,02,300	27·1
1953 ..	10,87,100	136	7,20,200	66·2	3,66,900	33·8

Examination of the available cow-hides in the important hide markets has shown that quality has deteriorated during the past few years. Whereas no appreciable change has been noticed in the total number of hides available, the number of good quality hides has decreased considerably. The slight increase noticed in respect of good quality hides during the past four years has been more due to the lowering of standards in the quality of raw hides by the tanners rather than the inherent quality of the hide itself. In this connection it has been observed by experts that much of this deterioration in quality can be compensated by attending to the following two important factors :

(1) The time between death and flaying and curing of the hide plays a very important part in the quality of the hide. Hides flayed and cured immediately after the death of an animal are better.

(2) Coagulation of blood takes place in the small capillaries in the hides of dead animals which tells on the quality of the leather produced. If this feature can be attended to in time, a better quality of hide will be available.

The above information would seem to indicate that though there will be a decline in the quality of cow hides in case the trade has to depend entirely on dead and fallen hides, there is good deal of scope for effecting improvement in the quality of the cow hides available from dead animals which would, to an appreciable extent, meet the demands of the trade. It has to be further observed, that the Government of India's panel on leather industry had estimated in 1947 that 75 per cent of the available hides were from the dead animals and only 25 per cent from the slaughtered animals. It is, therefore, obvious that though the requirement of quality hides will be affected to some extent in case the trade has to depend entirely on dead and fallen animals, there is good deal of scope for improving the quality of hide by adoption of better techniques. This approach offers considerable latitude for minimising the difference in quality between slaughtered hides and those available from dead and fallen animals. Apart from this consideration, the view expressed by those who advocate a complete ban on cow slaughter candidly asserts, that continuance of cow slaughter should not be permitted in the interest of the hide trade alone, but that the problem should be viewed in the larger perspective in which the sentiment and culture of the people should receive due and prominent consideration. It is stressed that the country should be prepared to suffer the loss consequential to the shortage in production of slaughtered quality hides rather than ignore and sacrifice the sentiment of a vast majority of its population. As far as the future of the industry and the manpower utilised in hide trade is concerned, the possible economic setback accruing from unemployment and loss in trade is capable of being made good by scientific and concentrated attention on dead and fallen hides, buffalo hides whose number has consequently increased and utilisation of the carcasses for manufacture of meat and bone meal—a virgin field which has vast scope for

development in the country. This change in approach should absorb comparatively larger number of workers in this industry.

(*b*) *Unlicensed slaughter houses*—Next we take the problem of unlicensed slaughter houses. The figures for 1952-53 show, that there were about 45 unlicensed slaughter houses in nine districts of the State. Most of these are located in the residential houses of butchers or in the rural areas where effective control is normally impossible. This practice, even in normal circumstances, is anomalous. As meat constitutes an important article of diet of a large mass of population, it is necessary, that it should be produced from disease-free animals and slaughter should take place only under reasonable hygienic conditions. For this prupose, it is essential to have suitable and well protected premises and also arrangement for ante and post-mortem inspection of cattle. For obvious reasons, there is considerable difficulty in exercising effective control over unlicensed premises. It is, therefore, necessary that all unlicensed slaughter houses should be closed and suitable arrangements provided for slaughter of animals and marketing of meat in urban as well as rural areas. It is recognised, that there would be some difficulty in the control of such slaughter houses in the rural areas but with the establishment of a network of Gaon Panchayats all over the State, the difficulty in effecting proper supervision and control should not be insurmountable. The *gram panchayats* should be empowered to license only such premises as fulfil the prescribed hygienic conditions. Where a qualified Veterinary Surgeon is not available for supervising the ante and post-mortem inspection, arrangement should be made to entrust this work to the nearest stockman trained in meat inspection. In brief, the Committee feels that all slaughter of animals for trade in meat should be carried out in licensed premises only, both in urban as well as rural areas, and the necessary machinery for this purpose should be evolved.

A passing reference may be made regarding the prevailing conditions in the existing slaughter houses. The condition in most of the recognised slaughter houses is, to say the least, shocking. Apart from insanitary surroundings, no covered sheds are provided for the slaughter of animals. Both from the point of view of ensuring better hygienic conditions as well as avoiding contamination of meat and spread of infections through it, it is urgently necessary to improve the existing conditions in the slaughter houses. Again, a certain degree of privacy is essential in consideration of public sentiments. This is at present wholly lacking due to the practice of slaughter in improvised and unsatisfactory premises. Another important feature which, in the opinion of the Committee, merits urgent attention, is the removal of slaughter houses from thickly populated areas, where they are located at present in some towns, to the outskirts of the cities or towns at a reasonable distance.

(*c*) *Goshalas*—Since times immemorial the cow has been held in great reverence in India. With the advent of foreign domination and economic deterioration of the people, these institutions, known as *goshalas*, came into existence ; their primary object being the protection of cow

from slaughter. It is estimated that about 60 per cent of the cattle maintained in these institutions are old, decrepit and unproductive. Most of the income of these institutions is derived from business transactions. As slaughter houses were mostly located in cities, Gaushalas were also established in urban areas, despite the fact that urban surroundings are ill-suited for the housing of uneconomic cattle. Very few of these Gaushalas have sufficient land for cultivation and grazing and majority have to purchase fodder and concentrates from the open market. The cess collected on behalf of these institutions is not made available in full for the laudable object for which it is collected and a substantial portion of it is withheld by the businessmen who realise this due. Progressive decline in the income of the Gaushalas, coupled with the increase in the cost of maintenance of cattle, has further contributed to the deterioration and deplorable condition of these institutions. Due entirely to their strained finances, many of these institutions have stopped admission of old and decrepit cattle, as they are no longer able to maintain them. In fact, some of these centres have been closed down due to want of enthusiasm and lack of funds. Those, that are still continuing, are working under very strained conditions.

Two different kinds of cess, known as Gaushala cess and *Dharmada*, are levied in the markets. In areas where Gaushala cess is levied, it is deducted in the course of normal business deals and paid to the Gaushalas. The actual amount paid to Gaushalas, however, depends mostly on the will of the persons collecting the cess and in many cases the full collection is not remitted. As far as *Dharmada* is concerned, it is deducted in almost all the organised markets. The collections are accounted for by the businessmen, but the amount is spent in any form of charity that appeals to the fancy of the collecting agents. Though at present there is unrestricted freedom in regard to the disposal of *Dharmada* funds, there is a universal demand for checking its misuse. Quite a majority of Gaushalas in the State are maintained with the income derived from the Gaushala cess or *Dharmada*, but a few of them also depend on other donations and charities or are attached to some educational institutions. A few are being run under a Trust operated from within or outside the State. There are a few Gaushalas, run by Sadhus who arrange to collect gifts and donations for their institutions. Apart from the categories of Gaushalas mentioned above, there are others which exist on paper only and for which large number of persons collect charity in trains, markets or roads.

A detailed examination of the working of these Gaushalas and the historical background which has led to their establishment seems to indicate that there is considerable inherent potentiality in these institutions and with a little financial help, guidance, care and check they can contribute effectively to the welfare of cattle in this country. Apart from the maintenance of old and decrepit animals purely on humanitarian grounds and thereby satisfying the sentimental and cultural urge of a large mass of population, these institutions can do a great deal by functioning as model institutions for advancing the cause

of scientific cattle-breeding and meeting the requirement of milk and milk products of the towns or rural areas in which they are located. There is vast scope for canalising public charity on rational basis and if these institutions are developed on a systematic pattern and scientific lines, they are quite capable of attracting substantial donations for the cause of the cattle. A general consciousness already exists for the need and maintenance of these institutions and it is also observed that the management is keen to improve the working of these institutions with the object of making them self-supporting and of the greatest possible service to the cause of the cow and the people in general. In order to make the best possible use of these institutions, it seems necessary to license all the Gaushalas and no unlicensed institution should be allowed to function. For this purpose, comprehensive legislation has already been drafted with the object of regulating the working of these institutions and to enable them to collect all the cess or *Dharmada* charged by merchants in various *mandies* on their behalf. Along with the facilities granted to the Gaushalas for their satisfactory running, adequate provision has also been made in the Bill for ensuring their effective supervision and scientific working. The Committee considers that the 'Gaushala Act' needs early implementation.

(*d*) *Stray, wild, old, diseased and uneconomic cattle*—The problem of stray and wild cattle owes its origin to one common source. Most of these animals are either the uneconomic cattle let loose by the owners when they have no more use for them or they owe their origin to famine conditions, which occur in various parts of the country from time to time, when people cannot maintain their entire stock and after retaining those, that are useful to them, the rest are allowed to fend for themselves. In urban areas owners of cows let them loose after milking them, partly, because they have no place to put the cows in and partly, because they wish to save the trouble of feeding them. Again in many parts of the country, there is a practice to let loose a bull on religious grounds and in some places the first heifer of the cow is also released on similar basis. All such animals are found loitering about in urban and rural areas and in course of time, by process of natural selection, the best among them survive and multiply. The progeny is hardy and strong and goes about damaging the gardens or agricultural crops all over in the country. Instances have been noticed in this State, where the wild cattle in some areas are found to be in much better condition of health than the so-called productive cattle of the farmer.

The problem of stray and wild cattle falls into two distinct categories—(i) Urban and (ii) Rural.

(i) *Urban*—In urban areas cattle are maintained mainly for milk and such animals are owned mostly by the *gwalas* or *ghosis*. On account of the high cost of feeding, the animals are let loose after milking and allowed to fend for themselves. The *ghosi* tries to maintain them at as low a cost as possible. These animals, which stray about in the cities, destroy the vegetation in the compounds of the bungalows and also damage the crops of the surrounding villages. In order to remedy

this evil, the approach should be to eradicate the cause that leads to it. The maintenance of cattle in urban areas is unnatural as cattle and land have always got to go together. The present practice of urban dairying has, therefore, to be discouraged and arrangements have to be made for the colonisation of *ghosis* and *gwalas* on the outskirts of cities at as reasonable a distance as feasible. Co-operative collection of milk should be organised from these colonies and its transport arranged, both morning and evening, for meeting the requirements of the city people. Cattle keepers should be encouraged by provision of adequate land for carrying on their vocation and the effort of the departments concerned should be to concentrate on the improvement of the animals in the adjoining rural areas from the point of view of milk production, without impairing the draught capabilities of the stock. Co-operative organisation of cattle rearing on this basis and collection and transport of milk in hygienic condition is, threfore, the only possible solution of meeting this nuisance of stray cattle in the cities. With this background of the problem, it becomes necessary that Municipal Boards should register and license the cattle maintained within their jurisdiction. Licences should only be issued to individuals, who can maintain milch animals for their family needs and can satisfy certain demands required for proper maintenance of their animals. Persons who let loose their cattle should be adequately punished, and cattle, not claimed within a specific period, should be deported to the nearest Gosadan or Goshala.

The problem of co-operative collection and marketing of milk from distant rural areas presents enormous difficulties. Co-operative organisations, who have been handling this work for some years now, find it difficult to compete with the unscrupulous vendor within a limit of 15 to 20 miles from the city. He can always disturb the business arrangements of a co-operative concern by temporary cut throat competition or by illegal practices. Besides, the milk producers themselves try to sell their milk directly to the consumers or *halwais* and make more money partly by cutting down the cost of transport by use of cheap bicycles and partly by adulteration. Beyond this limit of 15 to 20 miles it is always possible for the co-operative organisation to function more effectively. Considerable amount of good work has been done in the Uttar Pradesh on co-operative organisation of milk collection, processing and distribution to the public. Fairly well established co-operative dairies now exist at six centres, viz. Lucknow, Kanpur, Allahabad, Banaras, Meerut and Haldwani (Naini Tal). Adequate experience has been gained in the shaping of these co-operative concerns and similar co-operative organisations can be built up now all over the State. As the organisation has to be started all afresh, adequate financial assistance is needed for the first two or three years for a new unit to be established in a city. When once the business is captured and clientele is established, the new co-operative concern is able to manage the business not only on a self-financing basis but at a reasonable profit, which assists in establishing welfare activities for the benefit of the primary producers and consolidating the

work on a scientific basis. With this happy position obtaining in this State, it would be *desirable to initiate a pilot* scheme in some of the cities, say Kanpur, Allahabad, Banaras, Agra and Lucknow, where to begin with, the city *gwalas* should be removed from the municipal limits and housed in adjoining rural areas and the entire milk supply of the city should be entrusted to the co-operative concern. If this experiment works out successfully, which it should, the problem of urban milk supply will be solved much more satisfactorily and quality milk will be available to all consumers in a more satisfactory and hygienic condition. After this experiment succeeds, it may be extended to other cities where fresh units should be established and the process of removing *gwalas* and the animals from the cities can thus be progressively taken up in all the big cities of the State. This appears to be a feasible method of removing the milch animals and their owners from the cities and to establish their colonies in rural areas which ultimately will benefit agriculture production, the cattle as well as the cattle owners themselves. If this problem is handled earnestly, it will be to the best interest of city milk supply as also the welfare and improvement of cattle and agriculture in general. Besides ensuring supply of better quality of milk, it will save large number of valuable animals, which are drawn to the cities at present for meeting the urban milk demand and which deteriorate rapidly in the unnatural surroundings in which they are maintained.

(*ii*) *Rural Areas*—From the information available to the Committee it appears, that during recent times, the number of stray and wild cattle has increased enormously in the rural areas as well. In many parts of the State the menace of wild cattle has become quite serious and there are constant requests from a number of districts for the capture of stray and wild animals, which are doing enormous damage to the crops. This serious problem is affecting agricultural production and progressively assuming unhappy proportions. It has to be tackled on a State-wide scale. A possible method of dealing with this problem is to take up a few pilot centres where capture and taming of these animals can be organised by the Animal Husbandry Department. At these places, representatives of the affected districts can be called to watch the operations and they can subsequently arrange similar operations in their districts with the help of the Planning Department. A few pilot centres are initially necessary for demonstrating as to how this work can be handled and subsequently the trained personnel can be put in charge of this work in the areas where this menace exists. The animals that are caught have to be tamed. The male stock, which finds a ready market can be easily disposed of after castration. Likewise, the female stock which is of good quality and is capable of providing good bullocks and average quantity of milk, can be disposed of to the villagers. The task gets simplified if the villagers of the affected areas help to their utmost in the disposal of the female stock, which in practice is the main problem as far as wild cattle menace is concerned. The balance, that is found useless and cannot be marketed

locally, has perforce to be sent to the Gosadans. After the villagers are trained in the art of catching and domestication of these animals, the village panchayats should themselves be able to undertake this work with the help and co-operation of the village people in the affected areas and the Animal Husbandry Department. The animals to be sent by the village panchayats to the Gosadans may be sent either direct or through the nearest Gaushala when sufficient number of such animals has been collected.

(*e*) *Gosadans*—This is a name given to the centres which provide asylum for all the old, decrepit and uneconomic cattle, which cannot be reared by the individual cultivators or which are let loose by their owners after their economic utility is over. Establishment of such centres has been considered essential in the context of the growing urge on the part of the people to protect the cow or its progeny from slaughter, when it is no longer of any use to the society. The U. P. Census return of 1951, shows the number of cattle not used for breeding or work as 1,83,276 as against 1,33,914 in 1945. This works out to 0·7 per cent of the cattle population in 1951 and 0·6 per cent of the 1945. As against this number of useless cattle, the report of the Cattle Preservation and Development Committee set up by the Government of India, Ministry of Agriculture, puts the number of old, unproductive and decrepit cattle at 10 per cent of the total population. Even reducing this estimate on the basis of 5 per cent of the total cattle population of Uttar Pradesh, the number of old, decrepit and unproductive cattle works out to 11,75,642. Thus, if Gosadans have to be provided, calculations have to be based on the basis of either of these two estimates. In our peculiar agricultural economy and the general belief that the cow is never uneconomic, majority of our people do not like to part with their old and uneconomic cows and their progeny even today. The Chairman, Dr. Sita Ram, was informed at a number of places, e.g. Mirzapur, Ballia etc., that people do not part with their old and decrepit stock and maintan them till they die. It appears, therefore, that if the slaughter of cows and their progeny does not take place at all, quite a large number of unwanted animals would be retained till their death by the owners themselves. Calculating, therefore, on the basis of the census figures of 1·83 lakh of unwanted cattle, about 91 average-sized Gosadans, each with a capacity of 2,000 cattle, will be required. The areas of land required for this number of Gosadans will be about 2 lakh acres on the basis of one acre per animal or about 4 lakhs on the basis of two acres per animal, which is considered to be the ideal to aim at. Looking at the problem from financial point of view, a sum of Rs.70,000 (Rs.20,000 recurring and Rs.50,000 non-recurring) is required for the establishment of an average-sized Gosadan, which will provide accommodation for 2,000 cattle. With experience, this figure is capable of further substantial reduction. Even on this basis a sum of Rs.63,70,000 (Rs.18,20,000 recurring and about Rs.45,50,000 non-recurring) will be required for the establishment of 91 Gosadans. The Government of India have agreed to assist

the State Governments to the extent of 50 per cent on the establishment of Gosadans and substantial portion of this expenditure could be available from the grants made by the Government of India. The people should also be educated to conquer their prejudice against using cows in a plough or oil *ghani* or light work. If such cows can be utilised, as is the case in several parts of India, the cow will not remain as uneconomic as now. Such animals as cannot be retained by the owners will have to be removed to Gosadans.

Though it is recommended that every effort should be made to remove as many of the unwanted animals as possible to Gosadans in remote forest areas or to such lands as are not being used for agricultural production at present, yet it should be appreciated that it will be difficult in practice to remove the entire lot from the centres of collection. The responsibility for looking after the old, decrepit and unwanted animals has, therefore, to be shared by the populace as a whole. Thus, a feasible solution lies in the arrangement that every cattle owner should be made to look after his animals after it has given him the maximum benefit during its economic working period. The Gosadans should cater for the bare minimum of such population, which viewed from the point of view of the entire State, a particular region can not manage to maintain on account of its peculiar economy and size of the holdings. Next to the individual, the responsibility should be shared by a group of villages which should arrange for the maintenance of a certain percentage of unwanted animals in their area. Thus, the process should begin with the villager himself and should then be shared by the village as a whole and then a group of villages and then Panchayats, the tehsil and the district. If the unwanted and uneconomic cows and their progeny have to be effectively saved from slaughter, the responsibility has to be shared by the individual, the community and so on ; for it is utterly impracticable to expect that the burden of collection of such animals from villages and transporting them to the Gosadans will be within the exclusive means and competence of the State. The State can certainly be expected to share a particular portion of the expenditure which legitimately falls in its sphere of responsibility, but by far the substantial portion of the responsibility should rest on the owner and the community itself for it is but equitable to expect that if the cow has to be really saved from slaughter, the cost on this account should be equitably borne by the people and the State. The latter should provide all the help and facilities that it can manage with its limited resources, such as provision of cheap transport, arrangement for housing of animals in distant forest areas and economic utilisation of dead carcasses in rural and forest areas which would ensure substantial financial return from sale of hides, processed meat and bone. Simultaneously, arrangements will be necessary for the training of people in proper flaying and curing of the hides and utilisation of the various parts of the carcasses to the best possible economic advantage. This responsibility should be shared by the State in full. In due course, when this work is established, it will not only assist the Harijans in bettering their economic lot but will also help in establishing a productive work which will turn waste

into wealth. Goshalas, which are spread all over the State, can very effectively help in this Humanitarian task. They can function as centres for collection of old, useless and decrepit animals and can, with Government assistance, establish their own Gosadans for utilising, to the best possible advantage, the carcasses available in Goshalas. Government help should be available for construction of cheap shed, charmalaya buildings etc. for executing this work on a scientific basis. When the number of such animals gets beyond the capacity of the Goshalas, the surplus can be transported to the nearest Gosadan, established by the State or private agencies. A modest beginning can be made in respect of Gosadans immediately. Two Gosadans have already been established in the State and to begin with, it would be necessary to establish eight more Gosadans. As public opinion veers round in favour of this arrangement and requisite number of cattle are available for filling the Gosadans to their full capacity, more Gosadans should be opened for the needy areas. The Animal Husbandry and Forest Departments will have to work in close collaboration in handling this gigantic task and when the work gets going, it should be possible to train a large number of people in the handling of these centres in an effective and most economical basis. Further details regarding the working of these Gosadans and how they should be organised is given in the report of the Cattle Economics Sub-Committee (Appendix V).

(*f*) *Cattle Markets*—The latest publications issued by the Government of India in 1949 and 1951, show that Uttar Pradesh, with a density of 270 animals per square mile, possesses the largest bovine population in the Indian Union. Since the partition of the country and consequent loss of the best cattle breeding areas, the responsibility of this State for meeting the needs of the various State in the Union in respect of better bred live stock, on which our agriculture so much depends, has considerably increased. For effective and continuous agricultrual progress, therefore, improvement of the cattle is a prime necessity and deserves high priority attention. For this very reason, considerable emphasis has been laid in the State Five-Year Plan on the development of the live stock wealth of the State by providing the basic essentials for protection against contagious diseases, improved breeding and nutrition.

A sound marketing organisation is an essential prerequisite of any developmental programme. Like all other agricultural commodities, cattle development work also needs a network of properly regulated cattle markets, paticularly when it is noticed that lakhs of cattle change hands every year for meeting the needs of draught and milk. Often animals are marketed by the owners themselves but a substantial number is sold through a chain of professional dealers. Three types of marketing centres are common in the State, viz. fairs, *hats* and daily markets. Cattle fairs are held annually, half-yearly and in a few cases quarterly or monthly. They are held separately or in conjuction with religious festivals. The duration of a fair

varies from a day to about a month or even more but those lasting for about a week are more common. Cattle *hats* or bazars are held weekly or bi-weekly and generally for a day only. Daily markets are generally held in cities where milch and draught cattle are sold in *ahatas* and at present cattle for slaughter are sold in *mandies* and *painths*.

Various kinds of charges are recovered from the cattle dealers, e.g., admission fee, sale registration charges, brokerage, ground charge, octroi, etc. Quite a decent income is derived from cattle markets and fairs but only a very small proportion of it is spent on providing necessary amenities for the cattle, their owners or buyers. Since the cattle markets, *hats* and fairs serve both as assembling and distribution centres, necessary minimum facilities should be provided at these centres. At present even compound walls and fences are not provided except in a few daily markets and separate enclosures for different classes of livestock are rarely seen. At fairs, there is usually no housing accommodation for cattle or their owners. Shady trees, where available, provide shelter against sun and rain. Even the number of such trees in most of the fairs is inadequate. Similar conditions prevail at the *hats*. In daily markets, housing accommodation is provided in some cities but what is provided is grossly inadequate for the dealers' requirements. Arrangement for water supply at most of the fairs is unsatisfactory. Water for the cattle is generally provided in a common trough, or through a pond or pool, which often becomes a source of infection and spread of contagious diseases in the market and subsequently the areas through which the cattle pass. Arrangements for the supply of drinking water in *hats* and daily markets are also very poor. Veterinary aid and foot baths are provided by the department at most of the fairs but the arrangements are inadequate and need lot of improvement.

Keeping in view the stupendous task that lies ahead, it is obvious that it is not within the means of the State Government to finance from the existing State revenues, the necessary extensive livestock development work which, *inter alia*, includes improvement of these markets. At the same time it is agreed, that this problem needs urgent attention. It is common knowledge, that large number of cattle markets throughout the State are run by private individuals, who utilise the income derived from sale and purchase of cattle in these markets exclusively for their own benefit and contribute little or nothing towards livestock development. These markets create cattle health problems for the Veterinary staff and law and order problems for the Police, the cost of which is met at present entirely from the State revenues. In order to make a part of the income so derived by the owners of cattle markets, available for expenditure on the various schemes of cattle improvement in the areas where these markets are held and also for improving and regulating the markets, it is necessary to enact legislation for proper organisation of the marketing system which will ultimately benefit both the buyers as well as the sellers and assist in improving the stock. The Committee feels that a Bill should

be enacted for this purpose as early as possible and this extensive trade in cattle within the State should be properly regulated.

(*g*) *Carcass utilisation*—This matter has received scant attention so far. All over the State, large numbers of cattle and buffaloes die every year either due to contagious diseases or accidents, old age, infirmity, etc. The dead and fallen carcasses are handled very unsatisfactorily at present by the village Harijans who have little or no knowledge about scientific utilisation of dead carcasses. If the various products that can be secured from these carcasses could be recovered fully and properly utilised, it would mean a great step forward in building up the economy of the State and simultaneously the economic uplift of the Harijans. In addition, it would mean the best possible exploitation of a source, which goes completely waste at present. A training centre has been established for this purpose by the State Government at Bakshi-ka-Talab, where instructions are given on scientific methods of hide-flaying, curing and carcass utilisation. It has been noticed, that most of the trainees, who are availing of this facility at present, do so mostly with the object of securing a job after the completion of their training. The Committee feels that this centre should be so organised that majority of trainees admitted to this centre should on return to their villages, establish their profession in the villages. The practice obtaining at present in the villages is that the *Chamars* flay the hide in a very primitive manner and leave the carcass in the open to be eaten away by dogs and vultures. The other bye-products of the carcass are not utilised at all except for a few bones which are collected haphazardly and sold to the dealers. In the opinion of the Committee, therefore, the object of this training should be to teach the very persons who have to handle this work in the villages and to equip them with all the technique, so that the entire carcass is used to the best possible advantage of the village and the individuals handling this useful and promising industry. If large number of trained men go back to the villages and spread the improved technique of flaying, curing and tanning on a cottge industry basis and also full utilisation of carcasses, it will considerably enhance the returns from the dead animals and thereby contribute effectively to raising the economy of the cow and also the persons who undertake this important task and whose economic condition is the worst in the present structure of our society. It will be desirable to supply improved type of tools to the trainees after completion of their training and to popularise the improved implements in the country-side by issuing them on a subsidised basis and wherever necessary, free to selected centres in the rural areas. With an adequate trained band of devoted workers, it should be possible in due course to establish large numbers of *charmalayas* in groups of villages in the State, which would be the centres of recovery operation as soon as the animal dies so that the hides from dead and fallen animals can be dealt with promptly and thus improved to as satisfactory a standard as feasible. Such carcass utilisation should also

be made a part of the working of the Gosadans so that the cost of running these institutions is minimised to the utmost possible extent.

Recommendations

(1) Slaughter of animals should be permitted in recognised slaughter houses only and the present practice of clandestine slaughter in unlicensed premises should be stopped forthwith, heavy penalities being provided for contravention of this law.

(2) Slaughter houses should be removed from the present congested areas in the cities and located at a reasonable distance in the outskirts of cities and town.

(3) The present deplorable condition of the slaughter houses needs urgent attention. It is primarily the duty of the local bodies to attend to this task. Reasonable financial assistance should, however, be made available by the State for improvement of the premises where slaughter takes place with a view to improving the arrangements for slaughter and ensuring reasonable hygienic facilities for production of meat under sanitary surroundings.

(4) All ante and post-mortem examination of the animals should be handled by the staff of the Animal Husbandry Department and strict vigilance should be exercised in ensuring that only those categories of animals are slaughtered as are permitted by law.

(5) Adequate and satisfactory arrangements should be made at every slaughter house for the proper flaying and curing of hides and utilisation of blood as meal for feeding of livestock or as a manure.

(6) Supervision of slaughter of animals in rural areas should be entrusted to the Gram Panchayats who should provide suitable premises for this purpose. Ante and post-mortem examination in the rural slaughter houses should be entrusted to the stockmen trained in meat inspection.

(7) There is an urgent need for enacting legislation in regard to the registration and licensing of the Gaushalas, improvement in their working, proper supervision and management.

(8) The proposed legislation should provide for the remittance to Gaushalas of all dues collected in the course of business transactions on behalf of the Gaushalas.

(9) Wherever feasible, land should be provided to the progressive Gaushalas for production of fodder and maintenance of their dry and uneconomic stock.

(10) Gaushalas should also function, as centres for collection of stray and uneconomic cattle, which would ultimately be removed to the Gosadans.

(11) A Gaushala Development Board should be formed at the State level with a view to watch the progress of these institutions and to canalise their development on scientific lines. If administrative convenience so demands, this could easily form a part of the State Animal Husbandry Board and would deal exclusively with the working and improvement of the Gaushalas.

(12) Extensive propaganda should be undertaken by public bodies for augmenting the financial resources of the Gaushalas so as to enable them to undertake both the humanitarian part of live stock preservation work as well as scientific cattle breeding and dairying activities.

(13) There should be strict licensing of cattle in the urban areas. Licences should only be granted to individuals, who possess the means to rear their cattle satisfactorily. As a matter of fact, maintenance of cattle in cities should only be limited to individuals who possess the requisite facilities for housing and rearing of stock for meeting the requirements of milk and milk products for their own family needs. An initial step towards the achievement of this objective should be to license milch herds in urban areas on the lines of the Bombay Cattle Control Order, 1949.

(14) Cattle Trespass Act should be rigidly enforced in urban areas and all persons found guilty should be heavily fined. The scales of fines prescribed under the Act should be raised so that they have a deterrent effect on the defaulters.

(15) Rounding of stray cattle in urban areas should be the primary duty of the Municipal Boards who should appoint 'Mobile Squads' for this purpose. Apart from directly handling such animals themselves, these squads should assist those individuals or organisations who volunteer to assist in the task.

(16) All unwanted cattle should then be removed to collecting centres which might either be Gaushalas or other improvised centres specially established for this purpose. These cattle should then be transported to the nearest Gosadans.

(17) Effective organisations should be established by each municipality for handling this humanitarian task and for collecting donations for the implementation of this plan.

(18) The demand for milk and milk products in the cities should be met through the agency of well organised co-operative societies. Already, a number of well organised milk unions exist in the State. Their number should be rapidly increased and every facility should be granted to them by the State Government in the shape of financial assistance as well as legislative backing for developing their business in an economical and scientific manner. In this connection it is necessary to adopt early measures for organising the supply of Kanpur, Allahabad, Banaras, Agra and Lucknow towns entirely through co-operative organisations. When this attempt is successful, this plan should be extended progressively to other cities.

(19) In the rural areas, the task of handling stray cattle should be undertaken by Gaon Sabhas and Panchayats.

(20) On the lines advocated for the urban areas, registration of cattle should be undertaken in all the rural areas. The animals should be suitably branded or tattooed.

(21) Cattle Trespass Act should be rigidly enforced in the rural areas also with a view to check the menace of stray cattle and protection of crops from the ravages of these animals which are let loose at present.

(22) Arrangements should be made for the catching and taming of wild cattle which are proving a menace in many districts of the State. For this purpose, a few pilot centres should be initially established for demonstrating the process of capturing and taming of these animals.

(23) Teams of professional cattle catchers, already available in the country, should be utilised for capturing and taming of these animals. If necessary, some staff should be deputed to other countries, where system of capturing wild animals has been developed into a specialised art.

(24) Representatives of village panchayats should be trained at the pilot centres in the art of catching and taming of wild cattle. All useful animals caught as a result of these operations should be disposed of to the villagers. The balance, comprising of uneconomic and useless stock, should be removed to the nearest Gosadan.

(24) When cow slaughter is totally banned, every hamlet has to act as a Gosadan and the villager has to be induced to maintain his limited uneconomic stock after its active period of economic utility is over.

(26) Arrangements should be provided in a village or group of villages for maintenance of surplus uneconomic stock and their minimum maintenance requirement should be met on a collective basis. Similar organisation should be established by the Gram Panchayats at village and tehsil levels.

(27) All cattle pounds in the districts should be used as collection centres for unwanted cattle. There should be no bar to the admission of any type of animal and at fixed intervals, all unclaimed cattle, which cannot be disposed of locally, should be removed to the nearest concentration camp.

(28) For providing asylum to all old, decrepit, diseased and unwanted animals, Gosadans should be established in the State. The State Government should establish a number of Gosadans in forest areas for housing the surplus uneconomic stock which is beyond the capacity of the village, tehsil, or district organisations. The State should also arrange for cheap transport of such animals by road or rail and ultimately for the utilisation of carcasses by adoption of scientific methods of flaying, curing and tanning. As a beginning, the State Government should establish 10 Gosadans for the housing of the uneconomic cattle. Two Gosadans have already been established at Etawah and Ramnagar. Eight more Gosadans have to be established in order to provide one such centre for each revenue circle.

(29) As public opinion veers round in favour of this arrangement and requisite number of cattle are available for filling the Gosadans

to their full capacity, more Gosadans should be opened for the needy areas. In this attempt to provide for the unwanted animals till they are eliminated by natural death, the Animal Husbandry and Forest Departments should work in close collaboration, the latter, in particular should provide areas where Gosadans can be satisfactorily established.

(30) As there is no ban on the slaughter of buffaloes, these animals should not be allowed admission in Gosadans.

(31) In view of the extensive live stock trade within the State and its present disorganised condition, there is an urgent need for the regulation and proper supervision of cattle markets all over the State. A sound marketing organisation is an essential prerequisite of any developmental programme. Necessary legislation in this behalf will, therefore, ensure better facilities for the cattle, their owners and the purchasers. Apart from this consideration, the revenue derived from this source will enable large scale extension of cattle development activities in the State. It is, therefore, strongly recommended that a 'Cattle Markets Bill' should be enacted in the State as early as practicable and arrangements should be made for regularising the various charges, such as, admission fee, sale registration charge, brokerage ground charge, octroi, etc.

(32) Scant attention has so far been devoted to the utilisation of dead animals. All over the State, large number of buffaloes and other animals die every year due to contagious diseases, old age, infirmity etc. At present dead and fallen carcasses are handled very unsatisfactorily.

The Committee was apprised of the simple process of utilisation of carcass of dead and fallen animals. It was recommended that after proper flaying of the hides and their treatment, the resultant carcass should be utilised in accordance with the process evolved by Sri Satish Chander Das Gupta for utilisation of flesh and bones as manure, poultry feed and cattle feed. This work should also be spread through Community Projects, National Extension Blocks and Gram Panchayats.

(33) The Practice of throwing of dead animals in rivers should be prohibited by law.

(34) The training centre at Bakshi-ka-Talab should be so organised that large number of Harijans, who earn their living from this trade, are trained in the improved technique so that in due course, the scientific methods can be spread all over the State.

(35) In order to encourage and intensify the movement for scientific utilisation of carcasses, which are mostly wasted at present, improved tools and appliances should be provided, either free of cost or at subsidised rates, to persons employed in this trade.

(36) The use of cows for light draught work should be popularised in the State, as prevalent in several parts of India. This will make the cow still more useful and indispensable.

Term of Reference (4): "The methods of improvement of breed of cattle and for increasing the produce and ensuring the purity of dairy products."

This term of refernce covers a wide field and embraces almost every aspect of animal husbandry work as far as cattle development and economic utilisation of animals and their produce is concerned. Briefly stated, it would include :

(i) Breeding ;
(ii) Nutrition ;
(iii) Disease control ;
(iv) Disposal of surplus stock and produce ; and
(v) Ensuring purity of dairy products.

The problems of breeding have already been referred to briefly. The present position about nutrition has been dealt with in detail already. It is necessary, however, to deal with these problems in so far as they are inter-connected and how ultimately their proper co-ordination will lead to the desired objective of improving the existing stock. In this connection, attention is invited to the report of the U. P. Animal Husbandry Reorganisation Committee, which was appointed in 1947 under the Chairmanship of Rai Bajrang Bahadur Singh, Raja of Bhadri, who is a member of our Committee. The entire field of animal husbandry has been dealt with exhaustively in that report and various recommendations have been made as to how this matter has to be tackled in accordance with the requirements of the State. The Committee examined the position regarding the numerous recommendations made by the Animal Husbandry Reorganisation Committee and were pleased to note that large percentage of the recommendations have already been implemented ; quite a few are under consideration for implementation as and when funds can be made available, and in the changed circumstances which are now operating, it is felt that some of the recommendations need modification and have to be examined afresh. An important point, that needs special mention is that one of the vital recommendations, viz., the encouragement of private breeders and farmers to assist collectively in plans of taking up scientific breeding work and improving the livestock, has not yet received the State wide attention that it deserves.

In a predominently agricultural country like India, cattle wealth forms a vital link in a rational plan of any contemplated development. For this reason, the cow has always been held in reverence since ages, for not only does it provide the motive power for the various agricultural practices of the land but also most of the basic requirements of human being as well as the land, both while alive as well as after death. Economists have placed the returns available from livestock at least as high as those secured from food as well as cash crops. Indeed, it is yet well nigh impossible to think of Indian agriculture without the cow. The philosophers in this country have, since the days of ancient Aryan civilisation, regarded the cow as an integral part of the human

family and conceded to it a high place of honour in our society because of the numerous benefits this animal bestows on mankind in the shape of labour, manure, milk and milk products while alive, and skin, flesh, manure, bones etc., after death. It is precisely for this reason, i.e., acceptance of the cow as one of the family (which is not the case with other classes of live stock) that the country since time immemorial, had a sentimental outlook—based on sound economic reasons—towards the cow and its protection has formed, in this cultural background, an article of faith and honour with our people.

The Constitution of the Republic of India has recognised this fundamental basis and incorporated 'Cow protection' within its legitmate sphere of functions and activities. The people—who can rightly claim to speak for the nation—comprising philosophers, the statesmen and leaders of public opinion, have always been clear in their enunciation that the cow forms the nucleus of our rural economy and that with its proper presevation and improvement alone can a prosperous rural India—the real country—emerge, which will radiate happiness to all aspects of our national life and make it fuller and richer for the toiling millions. In fact, the economy of the cow will be the economy of the nation and its proper handling and treatment, the happiness of the people. Viewed in the landscape of this historical background, the nation has to rise or fall along with the improvement or degeneration of the cow. No thinking person can ever conceive of an Indian agricultural economy without its stable foundation—the cow. An attempt towards balanced agriculture will, therefore, be meaningless without a thoughtful attention to rural live stock economy. The expression 'rural live stock economy' is being consciously used ; for it is this specific aspect of the problem that is today staring the country square on the face. Urban livestock rearing is unnatural and artificial and a corrupt off-spring of our present-day civilisation. Cattle have their rightful place only in the villages and to shift their pick to the cities to meet the demand of our progressively increasing o ganisation is not only uneconomic but inhuman. This naturally leads to the deterioration of the best of our stock, for it is only the pick that the demand of modern civilisation draws to the cities. In the unnatural conditions of their existence, the poor animals break down much quicker than their natural span of life would otherwise have permitted and we progressively lose the best and thus the deterioration proceeds *ad infinitum*. Thus the poor cow has been a victim of unfavourable circumstances both in urban as well as rural areas. It has suffered due to increase of human population and consequent urge to produce more cereals and cash crops on an ever increasing area of fallow land, which was otherwise available for grazing. Simultaneously with this unhappy position regarding the rearing of animals in their natural rural surroundings, there has been progressive movement of the best milch stock to the cities, due purely to economic reasons, for meeting the demands of the city milk supply. The latter factor has been responsible for serious depletion of our best milch stock. This accounts for the constant and pressing demand from almost all the big cities of the country, regarding salvage of our best

animals, reflected most conspicuously by the perennial problem facing the big cities like Calcutta, Bombay and Madras. A little consideration will show how ridiculous and unimaginative the society has made itself by unwarranted problems of its own creation and wild goose chase to solve them after they have been created as the result of a *laissez faire* attitude and thoughtless planning. Nowhere in the world do people come across such absurd problems and one would seldom observe such anomalies and numerous ill -improvised urban dairies as one sees in this country. The obvious remedy, therefore, is a reversion back to the village and to make the cow more economical in its natural habitat. It stands to reason, therefore, that our planning has to be directed towards this objective and all measures based on pursuation, supplemented by legislation, have to be designed in a manner which will lead to this utimate goal. If the cow is to be saved—and with it the man whose destiny is closely interlinked with it—it will be possible only by its economic regeneration. It must be emphasised that an uneconomic cow cannot for ever remain a religious cow. Likewise, if an unwanted calf is not allowed to be born it will not be slaughtered. Improving the cow economically and avoidance of promiscuous breeding, which in turn leads to unwanted calves, can only, therefore, be a rational approach to this most difficult problem facing the country. Let alone the high sounding slogan "service of the cow"—which if one lifts the hypocritical veil, is nothing but a pure and simple objective of securing the best from the chronically starved cow—the problem is to save the cow and thereby the salvage of the mass of humanity in this country. Else, a neglected cow, on its own, will eat us away. Glaring instances to the point are the existing wild cow menace—a problem created by animals which just a few years back were all domesticated, but are now devastating large tracts of cultivated land all over the country and the stray cow whose damage is getting much more frequent and extensive than what one heard a few years back. Continue the present neglect and humanity disappears or improve the cow economically and prosper—this is the blunt and clear-cut poser before all thinkers interested in the future vision of a planned development of our country. This, in a nutshell, is our problem.

Having enunciated the problem, the next step is to evolve a multi-pronged attack to solve it and lay down clear-cut objectives and possible and practicable methods of approach. We shall now deal with the heads referred to above whose solution will provide an answer to this gigantic task.

(*i*) *Breeding*—In dealing with this aspect of our developmental programme, we shall have a concrete vision in front of us. The objective should be to produce as large number of quality bulls as would be progressively required to multiply suitable strains in the entire State. For this purpose, the State Government have already established 12 large sized Mechanized State Farms and in addition, there are two dairy-*cum*-cattle breeding farms with the Colonization Department and another Dairy Demon-

stration Farm connected with the Veterinary College, Mathura. Again, the energy of Gaushalas as well as private breeders can be canalised effectively in the rearing of quality stock and production of approved sires. Animals produced through these agencies should be utilised in compact groups of promising villages where large number of improved graded progeny can be produced. These group of villages, which now in common parlance are known as 'Key Villages' can supply sufficiently graded male progeny for spreading the improvement work in other parts of the State. As we progress ahead, the quality of animals available from Government farms and approved institutions will progressively improve and the best of this stock will, in the first instance, be made available to the key village blocks, which serve as large-scale field centres for multiplication of the improved seed material. These key village centres, where artificial insemination is being resorted to, will assist in rapidly multiplying the best available seed material and will thus form a source of supply of approved bulls for the rest of the State. In this vision of our future planning, it becomes obvious, that Government farms should always be five years ahead of the village requirements, so that the demand for progressively improved stud animals is met all along this harmonious chain, with a view to ensure a perpetual supply of better and better stud animals. Soon a time has to come, when reliable breeding records have to be available in regard to the stud animals produced at the farms and the key villages so that we know what precisely we are putting in the field and what we can expect from it. There is thus need to develop all the available resources on a truely scientific basis and to make our work, right from the Government farms up to the villages, such as would stand the scrutiny of the most exacting scientific eye. At all breeding centres, Government or private, there should be clear-cut vision of the animal that we have to produce. Enough attention has not been paid to this aspect and without a set objective, it will not be possible to attain the desired aim. Both intensive and extensive development work has, therefore, to be undertaken in this State in respect of improvement of the cow. Just a word here about the present system of distribution of stud animals in the State and the policy framed for allocation of different breeds for different tracts. It is quite true that specific breeds have to be allotted to different areas according to the type of the existing animals and soil and climatic factors. A margin has, however, to be kept for exceptions and a breeding policy in big State, or say even a district, cannot be made absolutely rigid or insusceptible to minor adjustments. For instance, if Sahiwal is the breed advocated for a particular area, which in patches, contains some pockets of animals akin to Harianas, it would be obviously unwise to insist that all animals in that area must necessarily be graded with Sahiwal bulls. Apart from inviting antagonism of the cultivators and bringing the progress to a standstill, it will be in the interest of the department itself, to develop such pockets with Hariana bulls, rather than diluting the Hariana strain with Sahiwals. Such healthy compromises are always essential in field developmental plans, both for ensuring steady

progress and co-operation of villagers as also for securing the best from the available best in the shortest possible time. Our best milch breeds, the Sahiwals, Sindhi and Tharparkar, are always problems in the field during the first few years of their introduction for the reason that they are shy breeders and cultivators who are used to active scrub bulls or in some cases Harianas—who are comparatively more active—do not like the bulls of the milch breeds. Again, there is a prevailing notion that progeny of milch breed bulls will necessarily be slow for draught. Experience has, however, shown that as far as the male progeny is concerned, at least for the first two generations, it is just as good as any other stock for work. As far as a milch yield is concerned, the graded Sahiwal or Tharparkar is any day better in milk yield than the Hariana grades. As it is extremely necessary to make the 'cow' a producer of reasonably good draught animal as well as an economic producer of milk, it is easier to achieve this objective by utilising our available sires of milch breeds. This plan fits in the areas, where the type of local animal is non-decript. With a little patience and perseverence, it will be possible to appreciate the advantage of milch breed bulls, though initially some trouble will be experienced because of their slow performance in covering. Besides it is not possible to secure even ordinary Hariana, let alone pedgiree animals in requisite numbers for the entire length and breadth of the State. We have, therefore, to use judiciously, whatever valuable material we possess. In this State, we have already instances where this type of grading work with milch breed bulls has been taken up and remarkable results achieved with non-decript and poorest village stock. The work at Bhadri, carried out by one of our members Rai Bajrang Bahadur Singh, amply justifies this statement. The hard and strenuous labour put in a large area under his scheme for the past fourteen years has shown how even with the limitations of the cultivator, it is possible to produce good working bullocks as well as cows yielding anything from 6 to 10 seers of milk. Again at Korhaghar, district Allahabad, Pandit Kashi Prasad Sirhir has very ably demonstrated what upgrading with a dairy breed can do to non-decript animals. Large number of graded animals (with Sindhi bulls) are seen in this area and quite a few look exactly like Sindhi and some of the progeny has quite a high milk yield. The villagers in this area are now fully convinced about the utility of the upgraded animals, both males and females, and are satisfied that they are much more economical, have much higher yield and almost just as much fat percentage as the local buffalo. Good work in this direction was seen by the Chairman in Ballia and Mirzapur districts—*Shahbadi* and *Gangatiri* being the favourite in Ballia and *Hariana* in Mirzapur and parts of Ballia. Another problem is that of handling the purely draught animals like Kherigarh, Ponwar and Kankatha breeds. These animals have always been reared by nomadic breeders and cultivators have seldom taken to their routine breeding. Nomadic herdsmen maintain large herds of these types, particularly the Kherigarh and Ponwar, on cheap forest grazing. As there is very little or no milk in these animals, they do not fit in the rural economy and their rearing has to be done entirely in areas

where grazing is available in abundance and at the cheapest possible rates. Due to progressive dearth of grazing facilities, there is an apparent need to put more milk in these animals with a view to make their maintenance more economical. An approach has, therefore, to be arranged whereby the nomadic breeder is able to utilise suitable bulls of more productive breeds to upgrade his stock with a view to produce suitable draught animals and at the same time is able to introduce more milk in the females. Summarised in a nutshell, therefore, the programme of live stock improvement has to be based on the key village pattern discussed above and the supply of bulls should be arranged through Government farms, Gaushalas and other institutions and private breeders interested in cattle breeding. Greater and greater use has to be made of private breeders and cultivators by providing all possible encouragement to them by grant of suitable subsidies or land for multiplication of their stock in the most feasible economical manner. Cattle improvement work can only be taken up along with the development of land and it has to be realised that in the initial stages, it is a very costly venture. Other countries have spent over years, large sums of money on the development of their cattle wealth and if we have to attain the desired objective, heavy initial expenditure will have to be incurred over series of years on Governmental and private agencies for the production of quality animals that are needed for improving the stock all over the State.

(*ii*) *Nutrition*—This aspect has been dealt with in detail under its relevant term of reference and does not need any further elaboration.

(*iii*) *Disease Control*—Prevention and control of major epidemics and provision of veterinary aid for the common ailments of cattle is the first and foremost *desideratum* in a systematic plan of livestock development. Without this, there can be no stability. People acquainted with field conditions can recall to their horror, how years of fruitful breeding work have been wiped out just by a sweep of an unfortunate epidemic or some insidious infection of cattle which make the best of the dairy herd useless for further breeding or milk production. In a land-locked State like ours, cattle are prone to attack from all directions, particularly from the migrating trade stock which commonly finds an ingress into this State. The various trade and migratory routes are well known and if quarantine outposts could be had at strategic sites along our vulnerable frontier, which is mainly the north-western and to some extent north-eastern border of our State, each incoming animal would be vaccinated and protected against the known serious infections. This procedure would ensure not only the safety of the migrating herds but also ward off the possibility of their acting as sources of infection in the areas through which they pass. This method of prophylactic control has been tried in some other States and found very successful. The State Government have already done a lot of pioneer work in regard to the control of cattle epidemics. A Biological Products Section

has been established at Lucknow for cheap manufacture of the required vaccines and intensive drives have already been launched for control of major epidemics by mass immunisation of cattle—to begin within vulnerable districts. What is now required is the minimum field staff and equipment for this big undertaking. At present the total sanctioned strength of Veterinary Assistant Surgeons in this State is 442 but the ultimate target for the whole State, as already approved in the Five-Year Plan, is 600. With the establishment of a well equipped Veterinary College at Mathura, it will now be possible to gradually secure the required number of qualified veterinary graduates and will, in the course of a few years, enable the State Government to fill the existing vacancies and ultimately to establish the minimum requisite cadre of the trained graduates needed for the whole State. It is necessary to aim towards the employment of 600 graduates as early as possible and then to increase the number as more qualified hands are available from the College. It will take some years to reach even this minimum target of 600 Veterinary Assistant Surgeons.

The strength of Veterinary Assistant Surgeons is supplemented in the field activity by the assistance available from the stockmen. The total requirement of the State, as indicated in the approved Five-Year Plan, is 2,400. Against this, the number of stockmen employed at present is 724. For the evident reason that it is not possible for the State Exchequer to bear the cost of a large field cadre for each department, a plan is being worked out for building of a pooled staff of village level workers. This staff, when properly trained, will doubtless be helpful in furthering veterinary aid and assisting in effective control of contagious diseases. Considering, however, that the multipurpose men of this category will be required for the field extension work of all the development departments, it is hardly likely that their assistance will be available to the requisite minimum degree and concentration needed for intensive cattle improvement drive and in particular prompt and effective disease control. Besides, the demands of cattle epidemics, which flare up like wild fire, are so sudden and unexpected that it will not be possible to base an intensive development programme on the likely availability of this cadre of village level workers alone. For this reason, an additional strength of stockmen will be necessary and it will be desirable to increase their number to a minimum of 1,500 stockmen in a phased programme of five years. Even after the building of this cadre of stockmen and along with the availability of village level workers, the strength of the field staff will not be sufficient to cope with the huge task confronting the State. It will be desirable, therefore, to train the villagers themselves in elementary knowledge of veterinary first-aid and technique of inocculation against contagious diseases. Whenever field conditions demand, the trained villagers can supplement the need for extra assistance in large-scale field operation.

(*iv*) *Disposal of surplus stock and produce*—This item has again been dealt with in detail under a preceding term of reference in which detailed examination has been made of the

various possible methods of reducing the pressure of uneconomic, old and decrepit and diseased stock through the agency of Gosadans. Further comments are, therefore, unneccessary. As to the disposal of animal produce, there is no difficulty about it at all. In fact, it is much below the requirement of the population. There is unlimited scope and need for improving the yields of animals so that the requirement of milk and milk products can be met more satisfactorily than is the case at present. In this context, the needs of the rural areas deserve as much attention as those of the urban population. At present most of the attention is being devoted to the needs of the urban areas only where the populace is more vocal. The Committee holds the view that the requirement of the villager should receive prior attention and the primary producer of milk and milk products should have priority over the production and after his elementary needs are met, then alone the surplus should be made available to the town dwellers. If the programme of development of live stock is taken up seriously, it should be possible to provide more for the rural areas and simultaneously to meet the needs of the urban population and thereby ensure better and happier economic returns to the villagers—the primary producer of milk and milk products.

(v) *Ensuring purity of dairy products*—Lastly, the Committee examined the question of ensuring quality of milk and milk products and it was unanimously of the view that adequate legislation already exists in the State and that suitable statutory powers are already provided for quality control. What is sadly lacking is an enthusiastic agency, that will apply the provisions much more rigorously so as to make them more effective than is the case at present. Work on fixation of standards for milk and milk products has been going on for some time under the auspices of the Indian Council of Agricultural Research and from time to time suitable standards, based on large amount of experimentation, are recommended to the State Government for adoption. These can be put in the statute book as and when necessary but the prime necessity at the present moment is to apply the standards already laid down more vigorously and effectively. The Committee is emphatically of the opinion that Vanaspati Ghee should be discouraged in every way possible. To guard against adulteration it should be sold in the form of oil or as a coloured product. Further import of skimmed milk from outside India should have heavy import duties put on them in the interest of local produce.

RECOMMENDATIONS

This part of the report deals with more than one aspect of cattle development, viz. breeding, nutrition, disease control, disposal of surplus stock and produce and the methods for ensuring purity of diary products. The recommendations as regard nutrition and stray animals have been dealt with in the preceding chapters. We are now dealing only with the various facts of breeding and disease control, which are the main planks in any plan of livestock improvement.

Breeding

Livestock improvement work is fundamental to the improvement of agriculture in any country, both to ensure proper balance in the diets of the people and to ensure adequate humus for the soil. Experimentation and improvement programmes concerning live stock are by their very nature essentially long term plans and relatively expensive as compared with other types of agricultural research and improvement activities. Further, such work must be continuous if it is to be effective, and should not be interrupted by fundamental deviations in the implementation of the objectives.

Production of Bulls

The improvement of live stock in the State has been handicapped on account of the shortage of superior breeding males. There is a wide gap between production and the demand for superior quality breeding bulls. This supply is at present being met by the State Mechanized Farms and purchases from the home tracts of the breed, from private breeders in the *key village areas* and round the artificial insemination centres. Bulls for the *key village centres* are supplied from the Farms and their progeny from the *key village* is purchased for distribution in those areas where the cattle are not so well-developed. It is, therefore, essential that bulls produced at the farms should be of superior quality and to attain this objective, it is recommended that—

(1) The Farms must be at least five years ahead in the breeding programme as compared with the *key villages*. The confirmation and the yield of the dams maintained for production of quality sires should, therefore, be progressively improved with set objectives for the attainment of high standards.

(2) To achieve the above objective, the Farms must have an ideal or a standard of the animal that it is the ultimate aim to produce. This standard should not be changed with the individual fancy but should be strictly adhered to by making coloured photographs or by making life-size cement models of the standard to be achieved. Photographic records of each generation of animals in the herd should be kept at Government Farms to enable the progress to be checked. However, well considered modifications will have to be effected from time to time as the work progresses, and change in circumstances demands.

(3) Purchase of animals from *key village areas* and artificial insemination centres should be encouraged. Better prices should be paid for the bulls purchased so as to provide incentive for the breeding of better animals. Private breeders should be encouraged to take up cattle-breeding on scientific lines. With a view to provide incentive to them for taking up this work, remunerative prices for the pedigreed animal should be guaranteed by the Animal Husbandry Department. In this connection the Committee recommends, that the valuable herd of Raja Sahib of

Awagarh, which has been built as a result of years of careful planning and scientific breeding, should be preserved for meeting the pressing requirements of quality sires in the State.

(4) In view of the constant and increased demand for better quality bulls, the Animal Husbandry Department should have adequate provision and facilities to buy animals at attractive prices to provide the required incentive to breeders.

(5) In order to cover the gap between supply and demand for superior sires, it is essential, that *key village areas* should be expanded as rapidly as possible and preference should be given to those areas which afford the best facilities for achieving the objective more expeditiously, such as the western districts of the State and promising pockets in other districts.

(6) It is essential, that methods to judge the quality of the sires produced at the Farms and the *key villages* should be worked out. These methods should be simple and easy in application. Information on the transmissibility of various economically improved traits is essential to form the basis for planning live stock improvement programmes. All available records have, therefore, to be examined to deterimne the heritability of such traits. It will be useful to collate the information available at the various Farms and circulate it to all concerned so that experience of different farms can be utilised by all interested in livestock improvement work. To achieve this, it is recommended, that a statistical section should be set up under the Animal Husbandry Department which would analyse this data from time to time and thus provide a barometer of progress achieved at these Farms. The publicity of such data will also be in the interest of the cattle-breeders who will know the general trend of progress in cattle-breeding work at the Farms. In the beginning, this will apply more to the *key villages*. It should be noted by the Farms that the main criterion of selection of the stock should be the overall improvement in milk yield, as the present trend of increase in human population and industrialisation in the country will lead towards greater demand for milk. The increase in milk should, however, be brought about to the extent that it does not impair the draught quality of the animal.

(7) The production of superior sires essentially depends on the quality of dams which means that the quality of dams in the villages should improve concurrently with the improvement of the other stock. Normally, the female of a cow, i.e. the heifer is the most neglected animal. To ensure that the heifer is capable of producing a quality sire, it is necessary that this animal should be fed and looked after during its growing period. To encourage the villagers to look after the female stock properly, it is recommended, that some subsidy should be given for the maintenance of heifers, particularly in the breeding tracts, on which depends the supply of the breeding sires.

(8) Gaushalas should be encouraged to produce as many breeding sires as possible and to follow the same pattern of breeding as is being done at Government Farms. This is being done by some Gaushalas but the efforts in this direction need to be intensified.

(9) Apart from the Gaushalas, there are large number of district agricultural farms all over the State which are capable of producing good breeding sires, but are not doing so at present. It should be mad obligatory for such agricultural farms to maintain some animals, depending upon the land and the fodder resources available with them, so that this important source of providing breeding sires is not lost to the State.

Conservation of Bulls

While it is essential, that production should be increased as rapidly as possible, it is just as important that the present number of sires supplied for field development work is looked after properly and their life is prolonged to make their maximum possible use. It is noticed at present that breeding bull in many parts of the State are not well looked after. The bull which used to be considered the *Raja* of the village is no longer considered so, on account of the pressure on land but is in fact a haunted animal and is frequently injured by the aggrieved cultivators whose crops are damaged by the animal, which is normally let loose for grazing. Such injuries render the animals useless and reduce their productive life with the result that good breeding sires that may have served for a period of eight to ten years become useless in half this period.

(10) To conserve the breeding sires, it is, therefore, recommended, that the care and feeding of such bulls should be entrusted to the village panchayats. This should be one of the important duties of the Panchayats and should be incorporated in the Pancahyat Raj Act. With the changing economy, the methods of cattle-rearing have also to change.

(11) By means of artificial insemination, it is now possible to use one sire where ten sires were needed before. To conserve the number of superior sires and to utilise them fully and effectively, the number of artificial insemination centres should be increased in the State in accordance with the availability of superior bulls. It should be the responsibility of the department to see that the best breeding sires are provided at artificial insemination centres. In no case should the number of these centres be increased if there is dearth of quality bulls because it is only the superior bulls which encourage or attract the villager to go to the artificial insemination centre. Normally, the villager is inclined to follow the path of least resistence and get his animal covered by any odd bull that is readily available.

(12) Artificial insemination is an important tool but not an end in itself and should not be considered a panacea for all the

livestock breeding problems, nor can it be a universal process in all places. Preference should always be given to the natural process. Research on artificial insemination problems, as applicable to our conditions, should continue simultaneously.

(13) The advantage of a good bull is nullified if its progeny is permitted access to inferior males. It is, therefore, recommended that arrangements for castration of undesirable entire males should be intensified. Great difficulty is experienced at present in removal of such animals especially from the town and municipal areas. It is, therefore, recommended that Municipal Boards and Notified Areas should be made responsible for the removal of all the undesirable males from their areas with the help of the staff of the Animal Husbandry Department.

(14) The term scrub bull has been applied rather vaguely in some cases. All animals which are not branded are dubbed as scrub, which is a misnomer. Many private breeders have donated good breeding bulls in their villages, which in the absence of Government bulls are doing useful work. Such bulls should be branded so that they are protected in the same way as the Government bulls.

(15) The practice of dedication of stud animals on religious grounds should be so controlled that only those animals which are approved by a competent authority of the Animal Husbandry Department are allowed to function. This source of supply of breeding bulls should not be condemned wholesale.

(16) It is observed that large number of good and outstanding animals from the villages are sold away by the farmers on account of their immediate need for money. The Committee considers that it will be to the best interest of livestock development work that all outstanding animals in each village should be registered and their export outside the State, without permit, should be banned. So long as best cows continue to be exported to Calcutta and other big cities, even the best efforts for breeding quality animals will lead to no effective results as the best of our cattle will be moved away from the breeding tracts.

The Committee, therefore, strongly recommends that the export of good milch cows to Calcutta and other big cities outside the State, without permit, should be banned forthwith.

(17) The Committee observed that there is a substantial surplus of female stock each year at the State Farms after meeting the needs of annual replacements. For spreading the better bred stock to the best advantage of the State, it is recommended that auction of animals culled or surplus at the Government Farms in the western districts should stop immediately. Further, if they are not in demand in areas where the Farms are situated, they should be supplied to the eastern districts on taqavi or at concessional rates where they will be better utilised for the upgrading work with the local non-decrepit animals.

Allocation of Breeds

(18) Allocation of breeds, as recommended by the Animal Husbandry Reorganization Committee, should be adhered to. Exception may be made in respect of selected areas where there is demand for a breed different from the one allocated there provided the area has animals akin to the breed fancied by the villagers. For instances, in tracts for which Sahiwal bulls have been approved, there is demand for Hariana bulls in certain pockets where animals akin to Hariana are available. In such pockets Hariana sires should be supplied by the department. This compromise will be in the interest of the breeders as well as the department and will lead to a rapid progress in such areas.

(19) On account of dearth of grazing facilities in forest areas, it is no longer economical to have animals for purely draught purposes as is the case at present with Kherigarh and Ponwar cattle. It is, therefore, recommended that efforts should be made to introduce more milk in these breeds by introduction of sires of more productive breeds.

(20) The improvement of hill cattle needs special consideration. It is recommended that strictly controlled field work should be undertaken in limited pockets with sires of some foreign breeds such as Dexter, Guernsey, Jersy etc. with a view to achieve quicker and effective results.

Disease Control

(21) It is very often noticed that the results of intensified and scientific breeding spread over years are wasted by epidemics of contagious diseases. To stabilise the results of breeding work it is essential that contagious diseases should be controlled and kept in check. The main source of contagious diseases is the movement of animals during the normal process of trade. To prevent the ingress of diseases, it is recommended that quarantine stations should be set up along the vulnerable borders where all the animals should be immunised against the main contagious diseases, particularly rinderpest.

(22) Further, to assure protection against contagious diseases, it is recommended that the whole cattle population of the State should be mass immunised against the main diseases, particularly rinderpest. It is recommended that the mass immunisation campaign covering all the districts should be completed as early as practicable.

(23) In the planning and executing of experimental and development work in livestock, requisite personnel should be available, trained in all aspects of animal husbandry work which includes breeding, nutrition and disease control.

The Committee, therefore, recommends that this State should have at least 600 Veterinary Assistant Surgeons for managing the programme connected with animal breeding and disease

control work. At present the number of hospitals in this State is only five per district as compared with seven per district in the whole country and 14 per district in the adjoining State of the Punjab. The obvious shortage of Veterinary Hospitals and staff in this State needs rectification as early as possible.

(24) Almost the entire extension work has to be spread to the villages through the agency of the stockmen. It is necessary, therefore, to have at least 2,500 stockmen but keeping in view the availability of the village level workers, it is recommended that the State should have 1,500 stockmen in a phased programme of five years.

(25) In addition to the proposed strength of Veterinary Assistant Surgeons and stockmen, it is essential that the villagers should also be trained to assist in elementary veterinary aid and in times of emergency, in disease control work. Unless this is done it will not be possible for the State to provide a stockman or a village level worker for each village. Steps should, therefore, be taken as early as possible for the training of villagers.

Disposal of Surplus Stock and Produce

(26) Whole harted co-operation of the livestock owners is essential for the success of livestock improvement programme and this can only be secured by ensuring adequate returns for his labours. With a view to ensure remunerative prices for milk and milk products, it is recommended that better transport and other facilities such as refrigerated vans, etc. should be provided for transport of milk and milk products from milk zones. This assistance should necessarily be provided by the State. The marketing arrangements should aim at the removal of the surplus produce only after leaving the basic requirements of the primary producer for his own consumption.

(27) Co-operative Milk Organizations should intensify the tempo of their activities in such areas and provide more assistance to villagers by supplying suitable breeding bulls, dairy utensils and other essential necessities at concessional rates.

Ensuring Purity of Dairy Products

(28) Though adequate legislation exists for ensuring the quality of milk and milk products and statutory powers are already provided, the agency for applying the existing provisions is not adequate and effective. It is recommended that steps should be taken to expand this agency so that the quality of milk and milk products sold in the market can be properly checked.

(29) The standards for milk and milk products as recommended by the Indian Council of Agricultural Research should be adopted in quality control work.

(30) Vegetable ghee should be discouraged and to guard against adulteration of pure dairy products it should be sold in the form of oil or as a coloured product.

(31) The State Government should request the Government of India to levy excise duty on the milk powder imported from foreign countries and the proceeds thereof should be handed over to the States for cattle improvement work.

MISCELLANEOUS

(32) Rules for grant of taqavi loans for purchase of good cows from the breeding tracts in this State or outside are cumbersome in operation with the result that an average cultivator, who is interested in cattle breeding, is not able to derive full benefit from this facility. It is recommended that 'taqavi loan' rules should be so simplified that the present cumbersome and lengthy procedure is short circuited and the hardship experienced by the cultivator is obviated.

(33) Livestock shows have already exercised a pronounced influence on the improvement of cattle in this State. They have aroused a competitive spirit amongst the villagers for production of better animals. It is recommended, that the number of one-day village cattle shows in the State should be increased and where development has sufficiently progressed, tehsil and district shows should be organised. To assess the progress of the State as a whole, including both the Government Farms as well as the villages, it is suggested that funds should be provided for a provincial show which should be held once in three to five years.

(34) The extensive cattle breeding and disease control programme evisaged above, necessitates the training of a large personnel in different branches of animal husbandry work. It is, therefore, recommended that higher post-graduate courses for training of specialist officers should be introduced at the U. P. Veterinary College at an early date. In those branches where facilities for higher studies are not available, provision should be made for deputation of deserving personnel for higher training abroad.

A refresher course should also be started for the Veterinary Assistant Surgeons and stockmen so as to enable them to keep in touch with the modern trend of progress in Animal Husbandry science and its better application in the field.

(35) Propaganda, if judiciously used, is a strong weapon in the hands of development workers. It should receive sustained and judicious attention at cattle shows and other functions. For this purpose, suitable pamphlets dealing with various aspects of animal husbandry and disease control should be prepared in easily understandable language and distributed to the cultivators. Other means and methods of propaganda, such as lantern slides, cine projectors, which have proved very effective in mass contact work, should be progressively intensified.

(36) The problem of rendering the unproductive cows sterile which in turn again produce useless and uneconomic animals is

of great urgency and significance in the peculiar circumstances prevailing in the country. It is, therefore, recommended that research on this aspect of animal reproduction should be intensified and an economic method capable of universal application invented so that the country can get rid of unproductive and useless females, which are thriving at present at the cost of the useful stock.

Term of reference no. 5: Review of the existing regulations regarding cow slaughter and the need for legislation in this behalf.

This term of reference has admittedly wide implications and incidentally forms one of the major pressing problems of the day. In recognition of the implications of this term of reference, therefore, one of the Sub-Committees was specially allotted the task of examining the various co-related problems connected with the affording of total protection to the cow and its progeny. In dealing with this subject the Sub-Committee examined *inter alia* (i) the various existing legislative measures and their working, (ii) vetted the proposed legislative measures in respect of (*a*) Livestock Disease Control, (*b*) Livestock Improvement, (iii) Improvement of Gaushalas, (iv) the existing legislative measures for prohibiting unhygienic collection of dairy animals in the urban areas, and (v) Municipal and District Board regulations regarding cattle slaughter and cattle pounds. During the course of its deliberations the Sub-Committee examined the following legislative measures enacted by other State Governments:

(1) The Bombay Livestock Improvement Act, 1933.

(2) The Bombay Animal Preservation Act, 1948.

(3) The Central Provinces and Berar Cattle, Sheep and Goats (Slaughter and Movement) Control Act, 1947.

(4) The Central Provinces and Berar Animal Preservation Act, 1940.

(5) The Madhya Pradesh Animal Preservation (Amendment) Acts, 1951 and 1953.

(6) The Bihar Preservation and Improvement of Animal Bill, 1953.

(7) The Madhya Pradesh Livestock Improvement Act, 1950.

(8) The Central Provinces Cattle Diseases Act, 1934.

(9) The Bombay Essential Commodities and Cattle (Control) Act, 1946.

(10) The Madras Livestock Improvement Act, 1948.

After detailed examination of the legislative enactments in the different States, the Sub-Committee formulated certain recommendations which were duly examined by the main Committee.

The problem of urban dairying and unhygienic collection of the most productive dairy stock under unnatural surroundings in urban

areas has already been dealt with in detail. As to the question of enacting legislation in this State for control of *livestock diseases*, *livestock improvement* and the *improvement of the Gaushalas*, suitable draft Bills have already been prepared and the Committee considered that early measures should be adopted for bringing these Bills into the Statute Book so as to give fillip to the livestock improvement drive all over the State. Certain modifications have been proposed by the Committee in the draft Bills which should now be considered by Government for further necessary action and early implementation of the proposals. In regard to the Municipal and District Boards regulations regarding maintenance of milch cattle in urban areas the Committee felt that though section 242 of the Municipalities Act, 1916, prescribes sufficient punishment in respect of offences under this Act, what was sadly lacking was an efficient machinery for implementation of the provisions laid down in the Statute Book. If the present deplorable state of affairs has to be mended, this serious shortcoming has to receive vigorous and urgent attention. Cattle Trespass Act, 1871, also came up for detailed consideration and the Committee was of the opinion that the cases under the Act should be tried by a senior Magistrate of standing so that persons found guilty of the offence might be heavily fined and the sufferers compensated from the fines so realised. It was further suggested that the scales of fines prescribed under the Act at present should be raised so that the penalties imposed have a deterrent effect on the defaulters.

The Committee next examined the problems connected with the imposition of a total ban on slaughter of cow and its progeny. In view of the magnitude of the problem and the earnest consideration which the various facts of this question involved, this subject has been dealt with *in extenso* separately below.

Cow Slaughter

Unofficial resolutions moved in the Uttar Pradesh Legislative Assembly, favouring total ban on cow slaughter being the genesis of this Committee, this matter formed part of the anxious deliberations of the Committee. The problem is both of an important and complex nature which has aroused passions in the past and which continues to exercise not only the deepest emotions of the people but is also of concern to the State. The cow is looked upon with veneration—no doubt with good reasons—by a very large section of the people, though many of them are compelled by circumstances to assist or connive at the slaughter of this animal, whose utility is admitted by all and sundry in the special conditions of India. Naturally, divergent views have been expressed before this Committee, as well as the two Sub-Committees which dealt with this question, over the ban on cow slaughter—expressed freely and frankly in no uncertain manner. The matter has been taken up by a number of people and societies whose resolutions have been forwarded to us.

That the cow and her progeny must be saved is common ground. The consensus of opinion expressed before the two Sub-Committees

which dealt with this question and the main Committee was strongly in favour of saving the cow. How to save the cow is the question. Different views were expressed about this. By love and force of public opinion, assert some. By love and public opinion backed by the powerful arm of the law, assert others. Protect only the cow in milk, calves below a certain age and bullocks in active service, but let the old, the decrepit and the useless be killed as an act of mercy or as a source of trade in hides and skins, urge some. As such protection has proved ineffective in the past and will remain so in future, let the slaughter of all cows and her progeny be banned by legislation, urge others. It is argued by the protagonists of cow protection that as long as this drain on cow population continues, which inevitably leads to the slaughter of not only useless cattle but some of our prime milch and young stock, there is no hope whatsoever of rehabilitating the present degenerated cow and this unhappy feature would grow from bad to worse as time progresses. According to this school of thought, slaughter of cattle is not desirable in India under any circumstances whatsoever and its prohibition should be enforced by law, for they maintain that even from the economic point of view this action is justified as it would save large number of valuable cattle that are being destroyed in the country every year and which it is impossible to save by any other means.

That the State is not competent to enact such a law is the contention of some. But it is pointed out that several States in India such as Rajasthan (1950), Madhya Pradesh (1951—53), Mysore (1948) and Bhopal (1954) have already enacted such laws, and Bihar has such a law on the anvil. Madhya Bharat and PEPSU are also reported to have enacted necessary legislation in this behalf. The recent declaration of the Attorney General of India in the House of the People on 1st May, 1954 that the Centre is not competent constitutionally to legislate on the point and that it is the States only that, under the Constitution, can pass such legislation, provides an authoritative answer to this question.

Local bodies should impose a total or partial ban on this slaughter according to local circumstances is the extent to which legislation would be permitted by some. That this will be a perpetual and fostering sore in the body politic and that it is much better to take a bold and decisive step once for all in the interests of national harmony and national wealth by having State-wide legislation banning this slaughter totally, is maintained by others.

As stated earlier in this report, it has been observed that absence of ban has been tried already for years past with little or no appreciable results on the improvement of the cow ; on the contrary, it has had a deteriorating effect as is clear from what we see all round. Nor has the number of the so-called uneconomic cattle lessened as a result of the existence of this freedom to kill. During war time, legislative measures were adopted by most of the State Governments banning slaughter of certain categories of useful stock. This effort has also not yielded any satisfactory results. It is an open secret that in large cities like

Bombay and Calcutta specially, cows of good breed, are rendered dry for the butcher's knife. There is a general feeling, therefore, that this partial ban on slaughter, which was intended to save all useful and productive stock from destruction has not yielded the results for which it was promulgated. In this connection the Committee also felt that situated as we are, it is always easy to maim a cow so as to attract mercy or pity. The age of the cattle can also be easily meddled with by disturbing the teeth. Having listened to the conflicting views on this vital problem, the Committee was unanimously of the opinion that time had come when some concrete action was called for regarding the solution of this perennial question which was creating good deal of discontent and, therefore, needed final and considered decision.

Much capital has been made about the excess of cattle in India. A closer analysis, however, reveals that even with the existing numbers production will have to be increased at least three times to meet the minimum requirement of milk. There is again need for the present population of the cow, as it has already been indicated in the preceding observations in this report, that replacement of the necessary bullock power itself needs the cow population available at present in the State. If this cow population is depleted, the State will have to depend much more for its bullock power on other States in the country. It is very difficult to appreciate, therefore, as to how the requirements of the people can be met by reducing the number of cattle. The cry that is constantly raised about excess of cattle, therefore, seems to be an excuse for following the least line of resistance. Nothing would be easier for the Committee than to advise the Government to adopt an attitude of *laissez faire* or pusillanimity. It will be just a counsel of despair or even a shirking of duty, to suggest that because the problem is so difficult and delicate, the safest solution is to let things drift so as to get rid of a substantial slice of the population. If this suggestion is accepted the question that naturally crops up is as to how we shall solve the problem of milk supply and also the vital problem of manure which is so sorely needed for enhancing the phenomenally low yields of the land. The answer seems to lie not so much in eliminating the poorer strata of the cattle population as in husbanding our resources and harnessing them effectively for the attainment of the above objectives. The point that there is not enough food today to feed the useless cattle and men at the same time, has been dealt with elsewhere in the report and possible ways and means of meeting the deficit have been suggested. It is admitted that the most serious obstacle that is coming in the way of the improvement of our cattle population at present is lack of adequate nutrition. Once this is assured and requisite breeding plans are adopted there is litle doubt that the poor cow of today will provide much better heifers and bullocks in the course of a few generations.

The trend of these considerations leads us to the conclusion that every possible effort should be made to save our cow population, both with a view to provide bullock power as well as manure and also to increase its productive capacity in order to ensure more milk production for meeting the minimum requirements of the populace. In the

a doption of this procedure, the State will doubtless be faced with the problem of a limited number of diseased, old and decrepit animals which will have no economic utility whatsoever. For this it has already been suggested that in addition to provision of Gosadans, State-wide propaganda will have to be initiated so that the cultivators themselves take up, to a large extent, the responsibility for maintenance of their old, useless and decrepit animals after their economic utility is over. Again, it is common knowledge that cows are being worked in many parts of the country in agricultural operations. If the pressure of uneconomic cows can be relieved by utilising them according to their capacity in the various agricultural operations of a light nature, the farmer will find it worthwhile to feed these animals better and thus their condition will progressively improve. Adoption of this practice all over the State, which will certainly mean some time and concerted propaganda will reduce the burden of our uneconomic animals to a great extent. We have already suggested the sterilisation of cows of poor breed and the castration of scrub bulls. This should help in reducing the number of uneconomic cattle. All these suggestions, if acted upon seriously should, we feel, in the course of a few years reduce the number of unwanted animals to the barest minimum which should be well within the capacity of the public and the State Government to maintain.

Some witnesses contended that the remedy of total ban by legislation may prove worse than the malady in the long run and that it might be too late to reverse the gear later. But the answer to this is clear. Laws made by man can be unmade by man in the light of changing or changed circumstances for, human society is not static, but dynamic and a progressive state should never hesitate to pass laws in the interests of the people at large. The Committee discussed the the reports of the two Sub-Committees thoroughly together with the evidences recorded before it. It was felt that since the present by-laws framed by local bodies have reduced cow slaughter considerably, the step of total ban through State legislation is the next step and sequel only.

Slaughter at unauthorised places have been going on merrily on a large scale and it cannot be stopped unless a ban is imposed throughout the State by law. The Committee also felt that vital things of this nature cannot be left exclusively to love or public opinion. A welfare State, particularly, does and should intervene in important matters concerning public wealth. For example, prohibition has not been left to the moral sense of the people and Government has intervened to enforce it. The Ancient Monuments Preservation Act was passed to save pieces of ancient architecture, sculpture and art from ruin or devastation. This was not left solely to the goodwill of people, famous though we are for our aesthetic sense and love of old things of historical or cultural value. In earlier days *sati* and female infanticide were abolished by law, remarriage of widows made permissible and child marriage banned. In the economic sphere, number of enactments have been made, without things being left to the sweetwill of the people. Even now, legislation in the economic, social and moral fields is being constantly considered. It it but proper that the State which is the organised will of the people,

must intervene and must not leave such an important matter as cow slaughter, which has such a far-reaching influence on the whole agrarian situation in the State, simply to the good sense or kindly feelings of people. On even humanitarian grounds, it is cruel to slaughter an animal which has served one so well for a long time simply because it is old. In some tribes in Africa, old people were said to have been eaten up, while some tribes in the North were said to consign their old people to a living grave among snows. Such practices are barbaric and revolting in the eyes of the civilized. On the other hand, in Great Britain, a system of old age pensions granted out of State funds has been in existence for decades now. Yet, to permit this in the case of a cow which has been giving us milk, bullocks and manure and is capable of giving us manure at least in the shape of cow-dung if nothing else and will give us bones and hide in case of death, is considered by some of our learned economists as a virtuous evil of necessity. So, preservation of cow, which is admittedly the mainstay of our agricultural and domestic life, must not be left to the mere goodwill of the people concerned. Total ban on cow slaughter is nothing new. For a long time it was the rule under the Mughal reign. The exigencies of the situation recently forced the Sindh Government and the Government of the West Punjab to impose a ban on the slaughter of cattle ; in Sindh such a ban is enforced in two days in a week, in the West Punjab the ban has been extended from one to two days in a week.

Recommendations

On the background of the above objective, analysis of the position therefore, the Committee at the meeting of April 7, 1954, finally adopted the following resolution :—

"Apart from the deeply rooted religious sentiments of a very large number of the residents of U. P. it is not only desirable but imperative in the interests of national economy, national health and national goodwill to save, protect and improve the cow and her progeny. Among other measures to serve this, the Committee is strongly of the opinion that the slaughter of the cow and her progeny should be totally banned.

For a number of reasons, the Committee is not in favour of the draft Bill recently sent by the Government of India imposing a partial ban on the slaughter of cows.

Having considered the pros and cons of the problem the Committee is firmly of the opinion that in the totality of the circumstances, cow slaughter be totally banned by the State by legislation once for all. Heavy penalties must be provided for an offence against such a law.

With immediate effect, slaughter of cow in unauthorised premises must be put down with a strong hand.

For such a ban by legislation to be sucessful and effective, mass consciousness in favour of the cow and her breed must be awakened and rekindled by non-official agencies and organisations working in a constructive spirit in this sphere of national life."

(2) Early measures should be adopted for enacting legislation in this State for control of livestock disease, livestock improvement and the improvement of the Gaushalas so as to give fillip to the livestock improvement drive all over the State.

Concluding Observations

This brings us to the end of our labours. All along the course of our deliberations we have been cognisant of the magnitude of the task allotted to us for investigation and advice. The various terms of reference assigned to the Committee cover almost the entire field of cattle improvement and the problems confronting the work of rehabilitation of the cow doubtless present numerous and almost inseperable difficulties. In this report, therefore, we have attempted to touch the basic problems only and to the extent they are directly connected with the multi-pronged approach towards the improvement of the present-day degenerated cow. It is recognised by every one interested in Indian agricultural economy that the vital problem of rural rehabilitation rests essentially on the improvement of the cow and its progeny. Without attention to this most important aspect of our economy, it seems well nigh impossible that we shall be able to achieve the objectives laid down for a permanent improvement of our agriculture. For ages past, the Indian agriculturist has been carrying on a system of balanced agriculture in which his cattlewealth has fitted in with his agricultural production. With the progressive deterioration in agricultural yields, the condition of the stock, which contribute so much towards the building up of a sound economy, has considerably deteriorated. Attention on agriculture alone, therefore, without simultaneous care of its essential adjunct, the livestock, is never likely to ensure a balanced harmony and our pattern of agriculture will consequently always remain unstable. As has been rightly stated in one of the observations made in the report of one of our Sub-Committees, the problem of the cow should receive as high a priority and attention as that of defence itself. We are fully conscious of the fact that this vast undertaking will mean considerable expenditure both on the part of the State Government as well as the public. The problem, however, is so serious that it cannot be put off for long. It will be suicidal to allow a policy of drift to continue. The problem is before us in all its seriousness and has to be solved with the combined will of the people and the State. The heavy expenditure involved in this undertaking, totally unproductive though it might appear for years to come, has to be incurred if the cow has to be lifted from its present-day deplorable condition. If we can save the cow and its progeny from slaughter, as has been recommended at the end of the last chapter of this report, it will indeed be an unique achievement worthy of our culture and tradition. The magnitude of the task should not deter us from attempting it. If the will of the people as a whole can be harnessed for the realisation of this objective and a mass consciousness created for the pooling of our resources for handling the task in earnest, there is every reason to hope that this problem—the biggest

that confronts the nation—will be solved like all other seemingly difficult tasks which we have accomplished with distinction since the date of independence.

While submitting this report, we fervently hope that the recommendations of the Committee will receive due consideration at the hands both of the Government and the public at large, irrespective of class, creed or community.

We the undersigned, agree to the report.

SITA RAM.

BAJRANG BAHADUR SINGH.

M. J. MUKERJEE.

VISHNU SHARAN DUBLISH.

MOHAMMAD HABIB.

AKHTAR HUSAIN.

बाबूलाल मीतल

मलखान सिंह

दीनदयालु शास्त्री

श्रीगोपाल शास्त्री (दर्शनकेशरी)

स्वामी भास्करानन्द

VIRENDRA VERMA.

H. B. SHAHI.

LILA DHAR ASTHANA.

SURESH PRAKASH SINGH.

AHMAD SAID.

रणंजय सिंह

रामनरेश शुक्ल, M.L.A., प्रतापगढ़

A. KARAN.

राजाराम शास्त्री

PART II—APPENDICES


सत्यमेव जयते

INDEX

"गो सम्बन्धी वेदमन्त्र"


सत्यमेव जयते

APPENDIX I

Opening observations of Dr. (Sir) Sita Ram, Chairman, Gosamvardhan Enquiry Committee, U. P.

FRIENDS,

As you are aware, this Committee was appointed by Government under their resolution of April 4, 1953 in pursuance of the undertaking given by them in the Legislative Assembly on December 12, 1952 in connection with two resolutions moved by Sri Rananjai Singh and Raja Virendra Shah. I am glad to find that Sri Rananjai Singh is one of our colleagues in the Committee. You are also aware how the matter is exercising the public mind and is being agitated in the Press and platforms. This matter has also been before our State Government for some time past and they have drafted certain bills on the points. Various local bodies have also passed rules and regulations about this, but some problems have still got to be tackled in practice.

2. It is no use dilating on the importance and the complexity of the problems which have been referred to the Committee for consideration and report. In my circular letter, dated the 7th May, 1953 to you I took the liberty of referring to the following points "How to check the growing menace of stray cattle; how to improve the quality and quantity of milk; how to encourage the cultivation of crops yielding various types of cheap, ample and nutritive fodder; what has to be done to prevent a decrease in pasture lands; how to dispose of dry and old cattle consistently with the sentiments of people and practical considerations; what special protection should cows and calves receive; how far bye-laws, rules and regulations framed by the State and Local Bodies were paper transactions and how they can be enforced."

3. In the inimitable language of Mahatma Gandhi, the cow is rightly called "the Mother of Prosperity". During the course of his foreword to Sri Satish Chandra Das Gupta's monumental book on the cow in India, Mahatma Gandhi commends "the volume to the lover of the cow as also to every one who would learn that the slaughter of cattle for food is a pure economic waste and know how he can turn the cow into a giver of plenty instead of being the giver of scanty which owing to criminal negligence she has become today." The value of the cow in the economic, agrarian and national spheres can never be exaggerated and has been recognised by all communities for ages past.

4. Office has been good enough to supply a lot of material and statistics to you bearing on the quantity of milk available to us as contrasted with that in other countries, the census of cattle during the last several years, the number of slaughter houses in the U. P., and the number of cattle killed in them and also the number of un-licenced slaughter houses etc. I have not yet been able to find out the price of hides and skins exported from or retained in the U. P. But in 1947-48, about 3,80,000 maunds of hides and skins were exported from the U. P., as against about

5,14,750 in 1950-51. According to figures published by the British Information Bureau, in May, 1953, India supplied to Great Britain alone hides and skins worth £11,74,000 which was about 3 times of what was supplied in May, 1952. According to this, Britain purchased during the first 5 months of 1953, hides and skins worth Rs.5,71,88,000 from India alone. While, according to this source in March, 1953 skins and hides worth about Rs.3,45,900 was sent to Britain by air from Delhi. A close study of all these figures is no doubt instructive and interesting, from several points of view. But the fact remains that though the slaughter of cows in recognised slaughter houses has considerably come down, slaughter still continues indiscriminately, according to information which I have and according also to reports which have appeared in the Press from time to time.

5. In November, 1947, the Ministry of Agriculture of the Government of India appointed a committee about cattle preservation and development. Their report is an exhaustive one. It might be advisable for us to see as to how far the recommendations of that Committee have been implemented by the Government. We may also have to give our own opinion, on the basis of facts existing at present, as to how far those recommendations can and should be carried out by the State Government, with or without modification.

6. The U. P., Government had also appointed an Animal Husbandry Reorganization Committee in 1947 under the Chairmanship of one of our colleagues Sri Rai Bajrang Bahadur Singh of Bhadri. Several of their recommendations have formed the basis of State Legislation passed during the last several years.

7. The Committee will no doubt discuss the various issues and also settle the procedure of our work in future. I venture to suggest that three or four sub-committees may be appointed to report about various matters which may then be considered by the full Committee. Interim recommendations can, if necessary, be submitted to Government. I am sure that the Committee would like to inspect some of the Goshalas, Gosadans, Central Government Animal Husbandry Institute in Bareilly, some State agricultural and breeding farms, Veterinary Hospitals, cattle markets etc., and also go through various rules and regulations to see whether there are any lacuna in them. As lot of material is already available to us, it may be considered whether it would be advantageous to issue any questionnaire. Perhaps some evidence of leading individuals and representatives of various organisations working on the subject may be useful.

8. I am very much obliged to the Hon'ble Chief Minister for his having consented kindly to inaugurate this meeting. That he has been able to find time to do so is a fresh proof of Government earnestness in the matter. I know that he will give us guidance and throw valuable light on the various issues which have to be dealt with by this Committee.

9. Gentlemen, I welcome you to your labours. I consider it a privilege to work with you in this Committee. I am confident that in attempting a solution of the problems entrusted by Government to this Committee, you will bring to bear on them your ripe experience and balanced judgment in the interest of the country at large, while erspecting the deep rooted sentiments of the people. With these preliminary observations, I request Hon'ble Sri Govind Ballabh Pant to be pleased to open the first sessinon of this Committee.

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APPENDIX II

Inaugural address of Pandit Govind Ballabh Pant, Chief Minister, Uttar Pradesh

FRIENDS,

I am glad to welcome you here today in connection with the first meeting of the Gosamvardhan Enquiry Committee. You have amongst you members representing different shades of opinion and coming from varying walks of life whose vast knowledge and experience will be readily available to this Committee for examining the various problems assigned to you for solution.

The 'cow' has no politics and the numerous benefits that this animal has bestowed on mankind have made it a benefector of humanity. You have assembled here today to address yourselves to the giagantic task of uplifting from its present deplorable condition and thereby salvaging the vast mass of humanity in this sub-continent. It does not perhaps need any stressing that in a predominently agricultural country like India, cattle wealth forms a vital link in any rational plan of development. We are all aware that, since times immemorial, the 'cow' has been regarded as an integral part of the human family and conceded a high place of honour in our society because of the numerous benefits that this animal bestows on mankind in the shape of labour, manure, milk and milk products. This reverence of the 'cow' has been a common feature with the Rulers in the past irrespective of their religion, caste or creed. Economists have placed the returns available from livestock as high as those collected from food as well as cash crops. Precisely for these reasons, the Constitution of the Republic of India has recognised this fundamental basis of our agricultural economy and incorporated 'Cow Protection' within its legitimate spheres of functions and activities. Thus, the 'Cow' has to be the nucleus of the economic rehabilitation of our rural areas. The immediate problem, that confronts us today, therefore, is that of the salvage of the cow and thereby rehabilitation of our own economy.

You are already aware of the circumstances which led to the constitution of the Gosamvardhan Enquiry Committee in pursuance of the undertaking that the State Government gave to the State Legislative Assembly on December 12, 1952. In my observations made before the Legislature, I have already traversed the ground that led the State Government to the decision to get this highly important and complicated problem studied in all its aspects in view. Your terms of reference cover a wide ground and practically all the facts relating to the economic rehabilitation of our cattle-wealth. In the course of your deliberations you will be confronted with a number of baffling problems, such as, the problem of unhygienic urban dairying, the stray and wild cattle menace, both in urban and rural areas, the colossal task of finding an sylum for old, decrepit, diseased and other uneconomic cattle, the perenmial problem of producing many blades of

grass where one grew before and adjusting our agricultural rotation in a manner that we get the best from our land, both for human beings as well as the cattle and a host of other problems. Again, the improvement in production, both quantitative as well as qualitative, of milk and milk products is a pressing need of the nation.

Perhaps you would like to hear briefly from me how Government have applied themselves to this urgent task of cattle improvement. Many of you are already aware of the 11 State Mechanised Farms where large pedigree herds are being built for production of improved stud animals for distribution to the villagers. Further the Dairy Centre at Nagla in Terai (Naini Tal) and milch unit at Hastinapur have applied themselves to the task of producing quality animals. You will also see the fine herd of cows and buffaloes which is being progressively built up at the Veterinary College Dairy at Mathura. Apart from the work at these centres, large scale development of first class cattle breeding areas in our western districts and selected pockets in other promising districts has also been taken by Government with a view to enhance the production of quality bulls for distribution to the needy areas. A first class herd of Sahiwal cows is being built at Bhadri by one of the members of this committee. The progressive aim of Government is to develop all promising cattle breeding areas with a view to spread the principles of scientific animal husbandry to the villages and to secure the full requirements of the State from the villagers themselves. Apart from meeting the needs of the State, this type of cattle improvement drive in the rural areas will assure handsome economic returns to the villagers, in a balanced system of mixed farming. Again the perennial problem of disease control has been constantly under the consideration of State Government.

We have already established a first class Veterinary College at Mathura to cater for the animal husbandry needs of the rural areas. The Biological Products Section has been considerably expanded with a view to meet the full requirements of serum and vaccine for control of epidemics in the State. Our production and utilisation of vaccine has already risen six to seven times over that of the pre-war years. Quite recently, Government have introduced a Five-Year-Plan for complete eradication of fell diseases like rinderpest and a systematic livestock improvement drive. This plan will cost over a crore of rupees over and above the normal budget and will be in operation all over the State. Attention is now being seriously focussed on the problem of animal nutrition, which has all along been a limiting factor in our progress. This aspect will be tackled at all the State Farms and particularly so at the three new enterprises, which the State Government have undertaken at Pashulok in Rishikesh, Kalsi Farm (Dehra Dun District) and Chak Ganjeria Farm on the 9th mile of the Lucknow-Sultanpur Road.

As far as the problem of old and decrepit animals is concerned, Government have already started two Gosadans in Etawah and Naini Tal districts and an experimental Hide-flaying, curing and tanning centre, which has been functioning for over a year now, at Bakshi-ka-Talab near Lucknow. Very soon, it is intended to spread this important activity to our Community Project areas, the two Gosadans and a number of villages in our State, with a view to fully utilise the carcasses to the best possible advantage of the State industry and workers connected with this trade.

I am certain, that with your varied and wide experience, and able guidance of your Chairman you will be able to find satisfactory solutions for all the problems which face the country today. I wish you Godspeed.

29-7-53.

APPENDIX III

Report of the Cattle Nutrition and Dairy Sub-Committee

In accordance with the decision of the first meeting of the Gosamvardhan Enquiry Committee held at the Vidhan-Bhawan on July 29 and 30, 1953 under the Chairmanship of Dr. Sita Ram, former High Commissioner for India in Pakistan, it was decided to appoint 4 Sub-Committees to report on the various terms of reference assigned to them. Of these, the Cattle Nutrition and Dairy Sub-Committee had the following personnel and terms of reference:

Personnel

1. Sri Ahmad Said Khan, M. P., Nawab of Chhatari — *Chairman.*
2. Sri Karan Bhai.
3. Sri Din Dayal Shastri, M.L.A.,
4. Sri Vishnu Sharan Dublish, M.L.A.,
5. Sri Malkhan Singh, M.L.A.,
6. Sri Akhtar Husain, M.P.,
7. Sri M. J. Mukerjee, M.L.C.,
8. Sri Virendra Verma, M.L.A.,

Members.

9. Sri H. B. Shahi, Animal Husbandry Commissioner. — *Secretary.*

Terms of Reference

(1) the trend of cattle population in the State and its relation to the available fodder and the carrying capacity of the State,

(2) the examination of the ways and means of increasing the fodder resources of the State, and

(3) the examination of ways and means of increasing the production and improving the quality of dairy products.

2. The first meeting of this Sub-Committee was held at Vidhan-Bhawan on October 4, 1953 at 11 a.m. The following members were present:

1. Sri Ahmad Said Khan, M.P., Nawab of Chhatari — *Chairman.*
2. Sri Din Dayal Shastri, M. L. A.,
3. Sri Malkhan Singh, M.L.A.,
4. Sri Akhtar Husain, M.P.,
5. Sri M. J. Mukerjee, M.L.C.,

Members.

6. Sri H. B. Shahi, Animal Husbandry Commissioner. — *Secretary.*

Right at the outset, the Chairman explained to the members the terms of reference and for their convenience, recapitulated the scope of their work and the lines on which the report, along with the recommendations, was to be submitted to the main Committee. He drew pointed attention of the members to the vital importance of the problems assigned to the committee and its responsibility in making suitable recommendations which would be well within the competence of the State Government to implement. Thereafter, two notes dealing with (i) trend of cattle population in U. P. (1899—1951) and (ii) requirement and availability of nutrients for total cattle population in U. P.—were presented to the members. These notes, which covered items 1 and 2 of the terms of reference of the Sub-Committee, were explained by the Secretary. In dealing with the salient points of the notes, the Secretary pointed out that the first statistical information about livestock population, in the available records, dates as far back as 1899 and since then census figures have been collected every five years. The variations during each census were explained and it was observed that the highest cattle population was recorded in 1904 when it totalled 2.39 crores. Subsequently there has been rise and fall in accordance with the availability of fodder, famine conditions and periodical ravages of diseases. In the latest figures, as recorded in the census of 1951, the main point to note was the increase in the buffalo population, despite the fact that no specific attempt had been made by Government in regard to the improvement of this animal. During the interval of 47 years it has been noticed that there was a total decrease of 4 lakhs as compared with the highest cattle population of 1904 which was quite an insignificant figure, as the reduction in population is capable of being made good within the course of one census period. Another important feature was that there was a noticeable increase of 13 lakhs of animals in the case of bulls and bullocks between 1899 and 1951 and simultaneously with it, a drop of about 8 lakhs had been recorded in the case of cows. The largest decrease in cow population, including young and working stock, has been recorded in 1944-45, which is attributable to the heavy demands of army requirements, during the war years. It would thus be seen that the cattle population has remained more or less steady and, in comparison, it was pertinent to note that the human population between 1872 to 1951 had increased from 4.26 to 6.3 crores.

3. Next, the question of nutritional requirement and availability was discussed and the detailed note, presented to the Committee, was explained. The vast gap that existed between availability and requirement, even on the basis of the lowest critical limit, was explained to the members. Possible ways and means of meeting this deficiency, which were at present only theoretical in conception, were put up before the members for consideration. The Chairman thereupon desired the members to ponder over the unhappy position regarding livestock

nutrition and put their considered views before the committee at the next meeting. The Secretary also brought to the notice of the committee that the note on "Availability of nutrients in Uttar Pradesh" was prepared by Dr. S. K. Talapatra and Dr. S. P. Srivastava—officers dealing with Animal Nutrition in U. P. under his guidance, and that it was desirable that this note should be got vetted by Dr. N. D. Kehar, Officer Incharge, Animal Uutrition Section, at the Indian Veterinary Research Institute, Izatnagar. He was of the view that some more valuable suggestions would be available as a result of Dr. Kehar's association with the collection of this data and their presentation. This suggestion was unanimously approved by the Committee.

4. The dates for the next meeting of the Sub-Committee which was to be held at Aligarh were fixed as 30th and 31st October, 1953 and it was also decided that the Sub-Committee should see the working of some of the breeding farms, the Veterinary College, Mathura, Dayalbagh Dairy, Agra in conjunction with this meeting. Accordingly, the second meeting of the Sub-Committee was held at Aligarh at the residence of the Nawab Sahib of Chhatari, the Chairman of the Sub-Committee, who acted as host for the committee. At the special request of the members, Sarvasri S. B. Singh, Director of Agriculture, U. P. and S. S. Negi, Conservator of Forests (who deputised for the Chief Conservator of Forests) were also present at this meeting to advise the Sub-Committee in respect of their sphere of activity regarding the proper utilisation of available resources of fodder and enhancement of fodder production in the State. The specific conclusions arrived at as a result of the discussion with Dr. Singh are summarised below :—

(1) Proper utilisation of the monsoon fallow, which was estimated to be about 1 crore acres, was suggested. Apart from yielding valuable *moong* and *lobia* grain for human consumption, this method of land utilisation would provide approximately 25 maunds per acre of green fodder. These crops of *Moong* No. 1 and *Lobia* No. 1 will cover the fields only during July and August leaving September and October for preparing the fields for Rabi sowings.

(2) Possibility of additional availability of fodder from 30 lakh acres of ravine land for a systematic rotational grazing needs to be explored.

(3) Additional availability could be ensured from certain portion of culturable waste land estimated to be 95 lakh acres, which was mostly in the Tarai area as well as usar tracts in the State. This land could be expected to yield about 15 maunds of fodder per acre.

(4) Additional increase of fodder as crop reside *bhusa* could be estimated at 20 per cent. over and above the present availability due to the utilisation of better seed, fertilizers and irrigation facilities that will be progressively available during the Five-Year Plan period.

It was considered that this much enhancement of fodder could be regarded as a reasonable estimate.

5. Next, the Committee discussed the salient points regarding fodder production and its utilisation, possibility of enhancement of production and the maximum carrying capacity of cattle in the forest areas with Sri S. S. Negi, Conservator of Forests. He was requested to supply information on—

(i) maximum number of cattle that Forest Department could admit in the available forest area which was not utilised for grazing at present,

(ii) area of waste land which had vested in Forest Department and which could be earmarked for pasture and fodder production.

Sri Negi was of the view that as far as the development of pastures in the forest areas was concerned, the existing areas were already fairly rich in pastures, many of the existing species had good nutritive value which had been recently borne out by the investigations of Dr. Kehar, Animal Nutrition Expert at the Indian Veterinary Research Institute. He was of the opinion that till these grasses were utilised properly and to the fullest extent, it would serve no useful purpose to propagate other indigenous or exotic varieties. The information since available from the Forest Department is summarised below :—

6. During the financial years 1950-51, 1951-52 and 1952-53 the number of cattle that were allowed to graze by the State Forest Department at full rates, at concessional rates or free of charge was 18,93,400, 18,11,507 and 20,25,638 respectively.

7. The total area in the State under the jurisdiction of the Forest Department is as under :

(i) 12,46,614 acres Waste-land.

(ii) 61,12,816 acres Government Reserved Forest.

(iii) 10,25,087 acres Private Forests.

83,84,517 acres.

So far as the aforesaid area of waste-land is concerned, the position is that part of it has come to Government after Zamindari Abolition. This area has not yet been surveyed and some portion of it has since reverted to the Gaon Sabhas, the exact area of which is not known.

8. Cattle usually graze within an area of 3 to 5 miles on the periphery of a forest block. The rest of the area under forest, which works out as 20 to 25 per cent of the total area, is not open to grazing because of density of forest, infestation with wild animals, swamps or prohibition against grazing.

9. The grazing capacity of 2 acres of forest area is 1 unit—cow is taken as one unit and buffalo as two units; goats and sheep make $\frac{1}{2}$ unit each.

10. No indication has been provided about the additional area in forests which could be made available for grazing of cattle or, in the alternative, the total number of additional cattle that forest area would provide for over and above the forest area utilised at present for grazing.

11. Since the conclusion of the 2nd meeting of the Sub-Committee held at Aligarh, it has been possible for Dr. D. Srivastava and Dr. Talpatra to meet Dr. Kehar and examine, in detail, the first note on 'Availability of Nutrients' submitted to the Sub-Committee at its first meeting. As a result of this discussion, certain modifications and other possible lines of approach have been further indicated and the note revised accordingly.

12. The entire ground which comes within the purview of the Cattle Nutrition and Dairy Sub-Committee has been now fully covered at its two meetings and the tours undertaken by the members. Briefly summarised, the position regarding the different terms of reference is as under :—

(i) the trend of cattle population in the State and its relation to the available fodder and the carrying capacity of the State.

A detailed note, special features of which have already been explained in para 2 above, is appended herewith.

(ii) the examination of the ways and means of increasing the fodder resources of the State.

A revised note in collaboration with Dr. Kehar, Officer in-charge, Animal Nutrition Section at the Indian Veterinary Research Institute is appended herewith for the information of the Sub-Committee and the Gosamvardhan Enquiry Committee. The essential features of this note are indicated below :

(i) The State of Uttar Pradesh possesses, besides other class of animals, 32.7 million cattle and buffaloes.

(ii) When the other classes of animals, who subsist on shrubs, scrub jungles, tree-leaves etc., are not considered, the scientific requirement for total cattle population comes to 84 million tons of dry matter, 3.9 million tons of digestible protein and 79,181 million therms of energy. When it is reduced for our

low-sized village cattle it works out to 58.8 million tons of dry matter, 3 million tons of protein and 61,762 million therms energy. Under Indian conditions appreciable economy can be effected in maintenance need of the animals without possibly impairing their efficiency. The requirement can thus be reduced to 47 million tons of dry matter, 2.6 million tons of protein and 53,633 million therms energy, if any further deduction is to be made, the requirement cannot be lowered below 47 million tons dry matter, 2.1 million tons protein and 45,303 million therms energy, which is regarded as the critical limit.

(iii) The different sources from which demands of cattle feed are met are food crop residues, vegetable and sugarcane tops, by-product of foodgrains, grass available in the forest and fallow land besides the limited fodder crops grown for cattle. When the total supply from all these sources is calculated on the basis of actual yield of different crops, as recorded by Land Reforms Commissioner, U. P. for the agricultural year 1951, it is seen that 28 million tons dry matter, 0.6 million tons protein and 16,686 million therms of energy are available. This available supply leaves a gap of 18 million tons of dry matter, 2 million tons of protein, 36,947 million therms of energy when the animals are fed at the *optimum level.* The gap remains at 18 and 1.6 million tons of dry matter and digestible protein respectively and 28,617 million therms of energy if the animals are fed at the *critically low limit,* beyond which the animal will exist at the cost of its body weight. This is the reason for progressive deterioration of cattle in the State. If the position is studied in terms of provision of balanced concentrate mixture to animals for production and green feed for maintenance, 239 lakh tons straw, 661 lakh tons green feed, 330 lakh tons green feed from grazing and 56.8 lakh tons concentrate mixture composed of oil cakes, grains and bye-products are needed. The available supply leaves a gap of 22 per cent straw, 66.1 per cent green feed, 41.1 per cent green feed from grazing, 84.7 per cent oil cakes, 51 per cent maize, 87.7 per cent cotton seed and 31.9 per cent bran.

(iv) With an increase in cattle population and better prophylactic treatment against contagious diseases, the population will increase and the shortage of feeds and fodder for cattle will become still more acute if no attention is paid towards production of more fodder. During the year 1951-52 the area under fodder crop was 17,87,200 acres only i.e., 3.6 per cent of the cropped area.

(v) The shortage can be minimised if dry and unproductive animals are sent out to the distant forest areas where the available grass is not fully utilised. Leaving those animals that are already grazing in the forest, there remains a shortage of 38.9 per cent in bulk, 77.3 per cent in digestible protein and 68.7 per cent in energy. Even when the critically low limit is taken into account, the shortage remains at 38.9, 72.1, and 62.9 per cent respectively for dry matter, protein and energy.

(vi) The gulf between demand and supply can be shortened by utilising 1 crore acre of monsoon fallow land for cultivation of 'Moong' and 'Lobia' type 1 and by inclusion of scarcity feeds like 'Jamun Seed' and 'Mango Kernel' and unusual feeds like Urea. Nutrients from these sources do not enhance the resources very much.

(vii) When expressed in simpler language, it is seen that the mixed population of 32.7 million heads of cattle can be taken as representing 27.13 million adult units. With the present available supply of straw, green feed and concentrate these adult units cannot be fully fed. When bulk is provided at full rate and low protein concentrate is fed, the available supply can support only 159.2 lakh adult units leaving 112.1 lakh units unfed. Fifty per cent increase in Agricultural production will support 62.9 lakh extra units. While fodders grown on *kharif* fallow and late paddy area together with scarcity feeds can maintain another 32.7 lakh units. Remaining 16.5 lakh unit cannot be fed unless more land is brought under fodder cultivation or resources from grazing area are increased.

(viii) The gulf between the demand and supply will only be narrowed when attention is paid to the following points :—

(*a*) our agricultural practices are reorientated with a view to lay emphasis on growing of more and superior fodder crops,

(*b*) low yields of food grain are increased by 50 per cent which will not be difficult in view of better facility for agricultural production after the first Five-Year Plan,

(*c*) more fallow land is brought under fodder cultivation and steps taken to introduce superior grasses in the common village pastures and forests,

(*d*) cheap and economical methods are found out for transporting the surplus grasses from forest areas,

(*e*) wherever possible economical, scarcity and unusal feeds are like mango and *jamun* seed and *nimboli* (Neem) are also utilised for augmenting fodder resources. The col-

lection of these scarcity feeds and the use of unusual feeds like urea should be encouraged. Work in respect of utilisation of the former should be popularised through Gaon Sabhas and Cottage Industries Organisation.

(*f*) preparation of silage is encouraged. The stockmen of the Animal Husbandry Department should be trained for the purpose so that they could propagate the practice in the villages. If Public Health Department could do it through District Boards, it would be appreciated. It would also immensely help, if Lekhpals could learn the technique.

(*g*) irrigation facilities are provided for raising fodder-crops either free or at concessional rates,

(*h*) common pasture lands are developed after consolidation of holdings and arrangements made for controlled grazing and adequate irrigation facilities.

(iii) the examination of ways and means of increasing the production and improving the quality of dairy products.

13. As far as this particular term of reference is concerned, it was the general view of the members that quantitative methods of improving the yield of milk and milk products, both by adopting scientific methods of breeding as well as feeding, were already well known. It is common knowledge that even if our animals are fed adequately, they yield much more than what they do otherwise. Provision of green feed for a large part of the year will further improve the production from our existing stock. The main stress that has to be laid, therefore, as far as the quantitative increase in production is concerned, is to work out ways and means of improving fodder production, both dry as well as green. This naturally leads to the larger question of proper utilisation of land for production of food, both for human beings as well as animals. In the opinion of the Sub-Committee, therefore, the matter that needs top priority consideration, as far as human and animal nutrition is concerned, is the adoption of rational and scientific approach for land utilisation for production of foodgrains, fodder and cash crops. Unless a system of balanced economy in the proper utilisation of land to meet the varied requirements of the State is taken seriously in hand, no headway can be made in respect of the improvement of live-stock for the obvious reason that nutrition obviously forms the greatest stumbling block in the progress of any plan of live-stock improvement. Breeding by itself leads to certain improvements but this can only be maintained if a proper plan of nutrition is assured from generation to generation. In this context, the problem of improving our reasonably productive animals by known breeding methods and making some provision for the uneconomic, scrub and old and decrepit animals, so that the interest of one does not conflict with the other, is of vital

importance. The latter aspect i.e., the problem of providing for uneconomic cattle is being dealt with by a separate sub-committee and its detailed consideration is, therefore, beyond the purview of this report.

14. As far as the improvement of our live-stock by adopting scientific methods of breeding is concerned, this subject is again within the purview of another sub-committee viz., the "Cattle Improvement Sub-Committee". However, it would not be out of place to make a brief mention of some of the salient points in this note. Methods of improved breeding are now well known. Where approved types already exist, e.g., the western districts of U. P., the best method to adopt is selective breeding for improvement of the Hariana and Murrah stock by provision of first class stud animals. This work has already gained momentum in these districts and is progressively increasing in tempo. What is needed is a more concentrated effort on expanding the areas of selective breeding and making available pedigree stud animals for further improving the village stock in these districts, which, if properly handled, will not only meet the large demand within the State itself but also supply the needs of a number of other States where Hariana and Murrah stock is in great demand. As far the areas where the cattle is non-descript, as for example large parts in central U. P., and the eastern districts, as also the hills, the programme of grading up the degenerate stock with bulls of indigenous breeds like Hariana, Sahiwal, Sindhi and Tharparkar and also suitable foreign breeds, such as Dexterms, Jerseys and possibly Brown Swiss has to be taken up in an extensive scale. The very promising results, which can be achieved by judicious cross-breeding with foreign breeds, can already be seen at the Naini Institute at Allahabad as also down South near Bangalore and in Nilgiri Hills. A note of caution is necessary at this stage as far as the work on cross-breeding with imported sires is concerned. It must be made clear to everybody concerned that one has to be very careful in taking up this plan of improvement as its injudicious adoption is likely to lead to some serious complication. This work, therefore, has to be limited in the beginning to selected areas where non-descript animals are available in plenty and where the results can be properly scrutinised and controlled. Some pilot work at a number of centres will, therefore, be necessary before putting this plan of action for mass scale adoption all over the State in areas where the cattle are degenerate and where selective breeding or crossing with indigenous stock is not likely to yield as quick results as crossing with foreign animals would do.

15. Lastly the committee examined the question of ensuring quality in milk and milk products and members were unanimously of the view that adequate legislation already exists in the State and that suitable statutory powers are already provided for quality control. What is sadly lacking is an enthusiastic agency that will apply the provisions much more rigorously so as to make them more effective than is the case at present.

Work on fixation of standards for milk and milk products has been going on for some time under the auspices of the Indian Council of Agricultural Research, and from time to time suitable standards, based on large amount of experimentation, are recommended to the State Government for adoption. These can be put in the statute book as and when necessary but the prime necessity at the present moment is to apply the standards already laid down more vigorously and effectively.

16. The report of the Sub-Committee is now approval and presentation to the main Committee.

(Sd.)

1. A. S. KHAN, M.P., Nawab of Chhatri, *Chairman.*
2. DIN DAYAL SHASTRI,
3. KARAN BHAI,
4. VISHNU SARAN DUBLISH,
5. MALKHAN SINGH, *Members.*
6. AKTHAR HUSAIN,
7. M. J. MUKERJEE,
8. VIRENDRA VERMA,
9. H. B. SHAHI. *Member-Secretary.*

SUB-APPENDIX III-A

A NOTE ON THE REQUIREMENT AND AVAILABILITY OF NUTRIENTS FOR TOTAL CATTLE POPULATION IN UTTAR PRADESH.

The present total cattle population of Uttar Pradesh is 32,763,327 heads comprising of :—

Milch Stock	11,056,186
Working animals	12,484,074
Young Stock	8,985,204
Breeding Bulls	26,053
Cattle not useful for work or breeding	211,810

The total estimated milk production in the State is 417.12 lakh maunds from cows and 684.74 lakh maunds from buffaloes. The estimated milk production of goats and sheep is 17.4 lakh maunds but as they subsist mostly on shrubs, tree leaves and scrub jungle their feeding and milk production has not been taken into account while calculating the total requirement of feeds and fodder for the animal population.

In table No. 1 the requirements of these animals have been calculated according to the standard recommendations of the nutrient-bulk, digestible protein and energy—for different class of animals. The requirements for work of different catagories of working animals and of milk for milch stock, both cows and buffaloes, has been calculated separately. As the bulk requirement has already been included in the maintenance requirement, it has not been shown separately for work and milk production. (See table 1). The above calculation has been made on the basis of the Hariana and Murrah animals but the village stock, both cows and buffaloes, are much below the size of these two breeds. The exact number of Hariana and Murrah animals and that of the local breeds is not known. It is assumed that about four-fifth of the cattle in Uttar Pradesh are of degenerate local type, whose requirement will be less than that of the larger animals of the improved breeds. The ratio of the live weights of the local village cattle to the improved stock is estimated to be in the proportion of 5:8 or in other words, the average body weight of the indigenous stock is taken as 500 lbs. and that of the improved stock 800 lbs. The requirement for maintenance of the entire population has, therefore, been reduced in the ratio of 1:1 taking into account the proportion of the low size and body weight of the local village stock. The nutrient requirement for work and milk production remains unchanged irrespective of the size of the animals. When calculated on this basis the total requirement comes to 58,870,400 tons bulk, 3,032,718 tons digestible protein and 61,762,200,000 therms net energy. (See table 1 B). The calculation has been based on the standard recommendation of the western countries but considering the climatic and other factors obtaining under Indian conditions this feeding standard appears rather liberal and good bit of economy can be effected in calculating the requirement for maintenance (See table 1 (C). The requirement of nutrients per head, after this deduction, when calculated for each class of animal, works out to the optimum supplement. If for the sake of economy any further deduction is made in the supplement, it cannot be reduced below 0.4 pound digestible protein and 4.28 therms net energy per 1000 lbs. liveweight. This can be regarded as the critical limit below which the

animals will subsist at the cost of their body weight which is the existing position and is responsible for progressive degeneration. If the animals are fed at this lowest possible limit the total requirement works out at 47,096,320, tons bulk, 2,145,887 tons digestible protein and 45,303,638,000 therms net energy (See table 1D.). In calculating these requirements the census figure of 1951 has been taken as the basis.

The total area of Uttar Pradesh is about 72,278,809 acres, of which 49,230,120 acres including '*dofasali*' area are under cultivation for foodgrains, fodder and other crops. After the abolition of Zamindari, the net area under forest on March 31, 1951 was 6,109,053 acres and fallow and culturable land 14,004,505 acres. This includes 1,025,087 acres of private forest. The rest of the area is not available for cultivation.

During the past few years there has been overall scarcity of food for human population and simultaneously there has been a perpetual competition for existence between human beings and animals for the available limited land as well as for certain by-products of foodgrains e.g. *chuni*, bran and in some cases oil-cakes. Thus the triangular problem of man, animal and land has been constantly in the forefront. This unhappy position, for obvious reasons, gets aggravated with the increase in the population of either man or animal, land being a *limiting* factor. The feeding of livestock has been mainly decided by the nature of crop production and the by-products available from this source. In the absence of adequate natural grazing, the nutritional requirement of animals is being met from straws, oilcakes, bran, pulse by-products, cotton seed, sugarcane and vegetable tops. In certain cases and regions, where they can be easily procured, and it pays to feed them, gram and barley are fed to milk and working stock.

The area under fodder crops, both *rabi* and *kharif*, is quite insufficient for the total cattle population. During the year 1951-52, area under fodder crop was 1,787,200 acres only out of the total of 49,230,120 acres cropped area which works out to 3.6 per cent. of the total cropped area. The availability of the 'Nutrients' from all these sources has been calculated on the basis of actual yield of grain as recorded by the Land Reforms Commissioner, U. P., during the year 1951-52 using straw : grain ratio as 2:1 for rice, wheat, barley, small millets, 1:1 for legume crops, 3:1 for *jowar* 2.5:1 for *bajra* and maize and 1:1 for *mandua*. The nutrients available from different sources have been shown in Table No. 2. It is common knowledge that in the course of normal trade, quite a substantial quantity of oil-seeds and cakes produced in the U. P., is exported and some quantity is also imported. Besides this, some fraction goes as manure, particularly ground-nut cake, even though the opinion is now gaining ground, that edible oil-cakes should not, due to the scarcity of cattle-food, be allowed to be used as manure. Lately opinion has been expressed by the experts that the use of edible oil-cakes as manure should be stopped by legislation. If this can be achieved, there is no doubt the availability of nutrients for cattle will considerably increase. But till such time this measure cannot be adopted, it would be difficult to increase the supply until and unless an equally efficient non-edible cake fertilizer is found out. It is expected that there would be some increase in the supply due to increasing use of artificial manure. The potentiality of nutrients from this source has been calculated from the actual production of cake from oil-seeds, assuming that the total quantity will be available for cattle feeding. Oilseeds generally give 70 parts cake but *til* and groundnut yield 60 per cent. cake only. The general

practice in the country is to feed whole cotton-seed to milch stock. The nutrients of the total seed have, therefore, been calculated after deducting the amount of seed required for sowing purposes from the total production of seed.

Only a small fraction of the grain is turned into flour in large mills and the bulk is crushed in ordinary hand or power-mills where the milling percentage is low. The yield of bran has, therefore, been taken as 10 per cent. and 'chuni' as 12.5 per cent of the whole grain.

The yield of grass from forest has been estimated as 1000 lbs. dry hay per acre and from the fallow and uncultivated land as 500 lbs. The total available nutrients amount to 28,754,450 tons bulk, 580,176 tons digestible protein and 16,686,230,000 therms net energy (Please see Table No. 2).

On comparing the availability and requirement, it is found that there is a shortage of 65.8 per cent. bulk, 85.1 per cent. digestible protein and 78.9 per cent energy on the basis of actual scientific requirements (please see Table No. 3 A). These figures work out as 51.2 per cent., 80.9 per cent. and 73 per cent. respectively when based on reduced requirements as explained above for the short size village cattle (Please see Table No. 3B). As stated before, it felt that 20 per cent. conomy can be made in the maintenance requirement of animals and when the availability is compared with these figures there still remains a shortage of 38.9 per cent., 77.9 per cent and 68.9 per cent bulk, digestible protein and net energy respectively (Please see Table No. 3C).

Finally when the question of supplementing the nutrients for all categories of animals at the critical limit is taken as the basis, the position does not improve very much so far as requirement of energy and protein is taken into account. At this level, provision of about 39 per cent bulk, 73 per cent. protein and 63 per cent. energy becomes necessary to maintain animals at optimum health. (Please see Table No. 3D).

Taking into consideration the fact that the total cattle population will register an increase consequent to cow protection, better prophylatic measures against contagious diseases of animals, it is obvious that the present shortage will progressively get more pronounced. Since 1945, an increase of 1,964,255 heads of cattle in the total population has already been registered. Unless attention is paid immediately towards production of more fodder crops and better utilisation of the available resources, it is obvious that it will not be possible to feed the increasing livestock population satisfactorily.

On the completion of the present Five Year Plan, it is anticipated that there will be better facilities for improved agricultural production consequent to the provision of enhanced irrigation and manure facilities, the two basic requirements of agriculture. When all the requisite facilities are available, it should not be an idle dream to expect that our phenominally low yields are capable of being increased by 50 per cent. thus making more nutrients available for human as well as livestock population. On this assumption, an attempt has, therefore, been made in the subsequent tables to show how the problem of cattle-feed shortage can be possibly overcome (Please see Table VIII to X), both by bringing more land under fodder cultivation and by improving the crop residue yields from increased crop yields.

More nutrients can be made available by harvesting the grass provided by nature at the right time then by collecting it after it has fully ripened. Cattle also derive much more through grazing from the same area. The present day carrying capacity of the forest grassland is reckoned at 2 acres per animal. But when the produce of 2 acres is collected, it will not maintain one animal throughout the year. Attempt has, therefore, been made to study the position in respect of nutrients when the non-productive animals are sent out to distant forest areas and also, when as many dry animals as the forest and fallow land can support, are sent away from the productive zone. It is seen that there still remains a shortage of 30.7 per cent. bulk, 73.8 per cent. digestible protein and 67.3 per cent. energy when the remaining animals are maintained on crop residues and grass available from forests. (Table 6). In actual practice, however, it is not possible to send so many animals to the forest. Actually those animals which belong to the villages at the periphery of the forest and some at cattle stations inside the forest depend on grazing in the forests. The number of such animals (cows and buffaloes only) is 14.9 lakhs. Leaving apart the area required for such animals at 2 acres per head, there still remain 3 million acres of forest whose produce can be a source of maintaining a part of the remaining animal population. When this possibility is taken into account, it is found that the shortage is 38.9 per cent. in bulk, 77.3 per cent. digestible protein and 68.7 per cent. energy (Please see Table No. 7). It is seen that the shortage of digestible protein and energy is very acute. It, therefore, becomes very necessary to cultivate fodders of high nutritive value which are the cheapest source of nutrient supply. Even if the crop yields and the yield of oil seeds are increased by 50 per cent., the requirement is not met.

About one crore acres are left as fallow during Kharif season. This area is not needed for Rabi sowing till the end of August. Two short period legumes Moong and Lobia type 1 can be grown after break of monsoon. These crops will supply green fodder @25 maunds per acre from mid-July to end of August and some grain can also be collected for human consumption, as pods of Moong type 1 can be picked throughout the season. The amount of nutrients available from this source amount to 42.95 lakh tons bulk, 2.6 lakh tons Protein and 2,747,000,000 therms net energy. Similarly, Lathyrus or similar other Legumeon 3 million acres of late Paddy area can yield about 11 lakh tons bulk, 1 lakh ton Protein and 1054 million therms energy. The total available nutrients thus become 341.5 lakh tons bulk 9.4 lakh tons Protein and 20,487 million therms net energy (Please see Table No. 2A). Thus it can be seen that even with this attempt there is no substantial improvement in the availability of nutrients, the increase being 6.3 per cent. in bulk, 8.3 per cent in Protein and 5.5 per cent in energy.

When the entire fallow land is brought under cultivation of 'Juwar' fodder, the requriement of bulk is almost made up. But the requirement of body building material–protein remains in short supply, this shortage being 62.8 per cent (Please see Table No. 8). This shows the importance of raising legume crops which are nearly five times more rich than 'juwar' is, and also contribute more per acre towards energy content. In actual practice, it is not possible to bring the entire fallow land under cultivation and wherever irrigation may be available there will be natural temptation to grow food crops. Two possibilities have, therefore, been explored by growing *'juwar'* and *'til'* in *kharif* which do not require irrigation and

by taking some area under legume crops at places where irrigation may or may be made available. The position of demand and supply on this basis has been shown in Table Nos. 9 and 10.

As the fallow land cannot be expected to be equally productive the yield from fallow land has been assumed as 2|5 of the normal land. *'Til'* is generally cultivated on land lying fallow and growing of this crop contributes equally towards human and cattle food. But the combination of *'Til'* and 'Juwar' on the entire fallow land leaves a gap of 54.1 per cent D. P. and 35.5 per cent. energy. When the 'Til' crop is substituted by a legume and the *'Juwar'* is grown only on 60 lakh acres, almost every nutrient is balanced (See Table 10). Under this plan the total area under fodder crop comes to 13,786,240 acres which is almost 1|4 of the present area under cultivation. This area will be reduced to 1|5.4 if yield from fallow land becomes normal and will further be reduced when Production goes up. If instead of growing fodder it is envisaged to meet the shortage by growing more food crops, the area required will be tremendously large as the yield of nutrients from an acre of fodder crops is much more than from a grain crop (Please see Table 11).

If instead of seeing the position of demand and supply in terms of bulk, protein and energy, calculation is made on the basis of balanced concentrate mixture for different class of animals and roughages to meet their bulk requirement, it is seen that 239 lakh tons of straw, 661 lakh tons of Green Fodder including tops etc., 330 lakh tons of fodder from grazing and 56.8 lakh tons of concentrate are needed (Please see Table No. 12).

In arriving at these figures half the milk produce of the cows and the total of the buffaloes has been accounted for, as about 50 percent of the cows yield milk upto 2 lbs. for which no extra supplement of concentrate may be made for the sake of economy. The requirement can be met from good quality of green grasses and other roughages. The number of buffaloes yielding 0-2lbs. of milk is very small and hence the entire production of buffalo milk has been considered. Similarly, bullocks are supposed to work for six months only when they have to be fed on concentrate. For the rest of the period they can subsist on green feed, grazing and straw. In this calculation the short size of the village cattle has been taken into account. Of the different grains produced in Uttar Pradesh, Maize, Barley and Gram are preferred for cattle feeding. The ration has, therefore, been computed from these grains along with Oilcakes and Bye-products. The actual basis of calculation is given below :—

	Concentrate lb. per day.	Green Feed lb. per day.	Straw lb. per day
Milch animals	according to milk yield (half produce of cows and botal of buffaloes)	30 lbs. improved 20 lbs. village.	6 lbs.
Working animals for (six months)	720 lbs. improved 450 lbs. village.)	30 lbs. improved 20 lbs. village)	5 lbs.
Followers ..	1 lbs.	10 lbs.	4 lbs.
Bulls ..	1.5 lbs.	20 lbs.	6 lbs.

It has been assumed that 1|3rd of Green Feed will be derived from grazing.

As against the requirement mentioned before 186 lakh tons of Straw, 224 lakh tons of Green fodder, 195 lakh tons of Fodder from grazing and 40.4 lakh tons of Concentrate are available. It will be seen that Uttar Pradesh is not self sufficient in these ingredients. The shortage in concentrate is not made up even when the entire produce of maize, Barley and Gram is utilised for feeding the cattle.

The dry roughage, i.e., Straw is short by about 22 per cent., the shortage of Green Feed and Grazing are 66.1 and 41.1 per cent respectively. As the entire fallow and culturable land has been considered in calculating the amount of grazing available, no area is left for collecting any extra nutrients. The individual items of the concentrate *viz.* Oil Cake, Maize, Cotton Seed and Bran are short to the extent of 87.4 per cent, 51.0 per cent 87.7 per cent and 31.9 per cent respectively. The shortage of these is not completely wiped out even when they are replaced by Gram and Barely which are in excess. In actual practice it is not possible to reserve total production of Gram, Barley and Maize until food resources for human beings are considerably increased in the State. The position of supply and demand can be summed up as under:

Feeding Stuff.	Total requirement (Tons).	Available (Tons).	Percent Shortage.
Straw.	23,907,470	18,573,007	22·3
Green Feed.	66,076,600	22,391,000	66·1
Green Feed From grazing.	33,038,300	19,507,000	41·1
Concentrate. . .	5,671,967	4,040,965	28·8

The oveall shortage in nutrients can be reduced by tapping other possible sources for increase of nutrients. The shortage in Straw can be partly met by an increase in the agricultural production and partly by raising Moong crop on 1 crore acre of Kharif fallow Land. When 50 percent increase in Agricultural production is achieved, 112 lakh tons more fodder will be produced and when the entire Kharif fallow is put under Moong, 92 lakh tons Green Fodder will be available besides Bhusa.

The total availability of Green Feed will thus become 428 lakh tons which will leave a gap of 35 percent. Resources from grazing can not be increased until attention is paid towards improvement of pasture. Shortage of straw will be made up with increased production.

The shortage of concentrate can be reduced by the inclusion of scarcity and unusal feeds in the ration. 146,400 tons of Jamun seed and 125,000 tons of Mango kernels can be collected in Uttar Pradesh annually. These can be included in the ration. Similarly, Urea can be introduced to the extent of 3 per cent of the concentrate mixture without injurying Kidneys. Inclusion of these items even leaves a gap of 21 per cent in the total concentrate. But when the agricultural production increases by 50 per cent the aver all shortage will be mad up though there will not be much relief in the individual constituents, Oil Cake and Cotton seed, which are presently short by 85 and 88 percent respectively.

Putting the above observation in a simple language the position can be summarised as follows. On the basis of modest feeding scheme shown in table 13 about 58 per cent cattle can be fed. Mixed population of 32,763,327 heads of cattle can be regarded as equal to 27,129,652 adult units considering animals up to one years old as $\frac{1}{4}$th adult unit, those from 1 to 2 years as 1|3rd unit and those from 2 to 3 years as $\frac{1}{2}$ unit. The available supply of straw is sufficient for 215.5 lakh adult units; green feed for 91.92 lakh units; grazing for 160.3 lakh units. 404 thousand tons of available concentrate does not give a balanced mixture as percentage of oil cake is quite low. This low protein mixture will be sufficient for 193.2 lakh units only. If full feeding of bulk and some grain is to the basis, it can be seen that only 159.2 lakh units can be fully supported by the available feeds and fodders leaving 112 lakh units unfed. Fifty percent increase in Agricultural production will enhance the supply of straw and green feed to one and a half time, and 62.9 lakh more units can be fed. Of the remaining 49.2 lakh adult units 32.7 lakh can be fed, when the entire Kharif fallow is put under *moong* fodder are of late paddy under Lathyrus or other similar fodder and mango kernal etc. are utilised. Thus to feed the entire cattle population it becomes necessary to increase the resources from grazing area or to put more land under fodder crop.

The protein rich ingredients of the concentrate mixture i.e. Oil Cake which is included to the extent of 20.30 per cent remains in short supply by 8.8 lakh tons, even after inclusion of scarcity and unusual feeds. This necessitates raising of more oil seeds. Among Oil Cakes, Groundnut and Til are quite rich source of protein but unfortunately Ground-nut does not grow in all types of soil, and its yield is not expected to be satisfactory on culturable waste land. The area to be put under Ground-nut or Til to bridge the gulf of Oil Cake works out to be 47.7 lakh acres or 175.9 lakh acres respectively. It is not possible to put so much area under oil seeds in the near future.

The other alternative is to eliminate the feeding of animals for $1\frac{1}{2}$ months when advantage can be taken of *Kharif* fallow for growing Moong or Lobia type 1. Elimination of maintenance ration for $1\frac{1}{2}$ months does not materially change the position as production ration has to be supplemented for milk and work.

Even with an attempt to feed one adult unit at the rate of 6 lbs. Straw, 30 lbs. green, both from Grazing and Green fodder, and 1lb. concentrate per day, it is found that supply of straw is 73.3, Green Feed 26.6, Grazing 24.7 and Concentrate 95 percent showing the necessity of either increasing area under fodder crop or increase in the Agricultural Production. The shortage of concentrate can be partly made up by raising legume crops (Please see Table No. 14).

If instead of studying the position of demand and supply for the whole State, the situation is studied district-wise it will be found that in some areas feeds and fodders are surplus and in others, there is acute shortage. In the absence of suitable agencies for collection and transport of fodder from surplus areas, no help can be rendered to deficit Zones. Under the circumstances discussed above the immediate solution of feeding both human cattle population in the State lies in the maximum utilisation of availab'e land for production of both Grain and Fodder crops.

In this note Sheep, Goat, Fowls, Pigs, Horses, Mules, Donkeys, and Camels have not been considered. As stated before sheep, camel and goat mainly subsist on shrubs and tree leaves, fowls are kept on kitchen waste, pigs on refuse and roots etc. The requiremnt of horses and mules comes to 138,400, tons bulk, 33,300 tons digesible protein, 714,800,000 Therms energy. The digestible protein for horses and mules comes mainly from grain, which has not been taken into calculation for cattle feed and at least, half of the dry matter comes from grazing in fields. Therefore, provision for only 219,200 tons dry matter will have to be made. Similarly the requirement of donkeys comes to 224,300 tons dry matter, 152,90 tons D. P. and 3,257 million therms energy. Donkeys graze on inferior weed type of grasses and hence provision for about 1|3 of dry matter and protein has to made i.e. only 74,770 tons dry matter and 5,097 tons of protein. If these animals are also to be considered, provision for 219,200 tons of grass for horses, 74,770 tons straw or grass and 1,291 tons oil cakes for donkeys will have to be made.

Summary and Conclusion

1. The State of Uttar Pradesh possesses, besides other class of animals, 32.7 million cattle and buffaloes.

2. When the other class of animals, who subsist on shrubs, scrub, Jungles, tree leaves etc., are not considered, the scientific requirement for total cattle population comes to 84 million tons of dry matter 3.9 million tons of digestible protein and 79,181 million therms of energy. When it is reduced for low size of village cattle it works out to 58.8 million tons of dry matter, 3 million tons of protein and 61,762 million therms energy. Under Indian conditions appreciable economy can be effected in maintenance need of animals without possibly imparing the efficiency. The requirement can thus be reduced to 47 million tons of dry matter, 2.6 million tons of protein and 53,633 million therms energy. If any further deduction is to be made, the requirement cannot be lowered below 47 millon tons dry matter, 2.1 million tons protein and 45,303 million therms energy, which is regarded as the critical limit.

3. The different sources from which the nutrients of cattle can be obtained are residues left from the food crop, vegetable and sugarcane tops, by-product of food grains, produce of the forest and fallow land besides the fodder crops cultivated for them. When the total supply from all these sources is calculated on the basis of actual yield of differnt crops as recorded by Land Reforms Commissioner, for the year 1951, it is seen that 28 million tons dry matter, 0.6 million tons protein and 16,686 million therms of energy are available. There remains a gap of 18 million tons of dry matter, 2 million tons of protein and 36,947 million therms of energy when the animals are fed at the optimum level. The gap remains at 18 and 1.6 million tons of Dry matter and D. P. respectively and 28,617 million therms of energy if the animals are fed at the critically low limit, beyond which the animal will exist at the cost of its body weight. This is the reason for progressive deterioration of cattle in the State. If the position is studied in terms of provision of balanced concentrate mixture to animals for production and Green Feed for maintenance, 239 lakh tons straw, 661 lakh tons Green Feed, 330 lakh tons Green Feed from Grazing and 56.8

lakh tons concentrate mixture composed of Oil Cakes, Grains and bye-products are needed. The available supply leaves a gap of 22 percent Straw, 66.1 per cent Green Feed, 41.1 per cent Green Feed from Grazing, 84.7 per cent Oil Cakes, 51 per cent Maize, 87.7 per cent Cotton Seed and 319 per cent Bran.

4. Due to cow protection and better prophylactic treatment against contagious diseases, the cattle population will increase and the shortage of feeds and fodder for cattle will become still more acute, if no attention is paid towards production of more fodder. During the year 1951-52 the area under fodder crop was 1,787,200 acres only i.e. 3.6 per cent of the cropped area.

5. The shortage can be minimised if dry and unproductive animals are sent out to the distant forest areas where the available grass is not fully utilised. Leaving those animals that are already grazing in the forest, there remains a shortage of 38.9 per cent in bulk, 77.3 per cent in digestible protein and 68.7 in energy. Even when the critically low limit is taken into account, the shortage remains at 38.9 per cent, 72.1, and 62.9 per cent respectively for dry matter, protein and energy.

6. The Gulf between demand and supply can be shortened by utilizing 1 crore acre of monsoon fallow land for cultivation of Moong and Lobia type 1 and by inclusion of scarcity feeds like Jamun Seed and Mango Kernel and unusual feeds like Urea. Nutrients from these sources do not enhance the resources very much.

7. The gulf between the demand and supply will only be bridged when attention is paid to the following points :

(1) our agricultural practices have to be reorientated with a view to lay emphasis on growing of more and superior fodder crop,

(ii) low yields of food grains have to be increased by 50 percent which will not be difficult in view of better facility for agricultural production after the first five year plan,

(iii) more fallow land has to be brought under fodder cultivation and steps taken to introduce superior grasses in the common village pastures and forests,

(iv) cheap and economical methods have to be found out for transporting the surplus grasses from forest areas,

(v) wherever convenient scarcity and unusual feeds may be included in the ration.

TABLE No. 1

Requirement of nutrients of total cattle population in Uttar Pradesh at standard recommendations.

		Bulk or Dry Matter (Tons).	Digestible Protein (Tons).	Energy (Therms).	Remarks.
For Maintenance	84,100,600	2,865,140	58,063,942,000	0·6 Lb. Digestible Protein and 6 lbs. S. E. per 1000 Live Weight.
For Work	..	814,000	17,671,000,000	
For Milk—				
Cows 417·12 lac mds.	..	213,118	3,446,441,000	
Buffaloes 684·74 " "	..	..	..	
TOTAL ..	84,100,600	3,892,258	79,181,383,000	

TABLE No. 1-B

Requirement when the maintenance is reduced for short size village cattle.

For Maintenance	58,870,400	2,005,600	40,644,759,000	
For Work	..	814,000	17,671,000,000	
For Milk	..	213,118	4,446,441,000	
TOTAL ..	58,870,400	3,032,718	61,762,200,000	

NOTE—The size of the village cattle is seldom more than 500 lbs. but the exact no. of heavy wt. is not known. A ratio of 1/5 and 4/5 has, therefore, been assumed.

TABLE No. 1-C.

Requirement when 20% is deducted from maintenance for economy.

	Bulk or Dry Matter (Tons)	Digestible Port.in (Tons)	Energy (Therms)	Remarks
For Maintenance	58,870,400	2,005,600	40,644,759,000	
Deduct	11,774,080	401,120	8,128,951,800	
	47,096,320	1,604,480	32,515,807,200	
For Work	..	814,000	17,617,000,000	
For Milk	..	313,118	3,446,414,000	
Net requirement	47,096,320	2,631,598	53,633,248,200	

TABLE No. 1-D.

Requirement when the maintenance is supplemented at the critical limit.

For Maintenance	47,096,320	1,118,769	24,186,197,000	Requirement calculated at 0·4 lbs. D. P. and 4·0 lb S. E. per 1000 lbs live weight.
For Work	..	814,000	17,671,000,000	
For Milk	..	213,118	3,446,441,000	
TOTAL ..	47,096,320	2,145,887	45,303,633,000	

TABLE No. 2.

Available Nutrients for livestock population.

Source	Bulk or Dry Matter (Tons)	Digestible prot. in (Tons)	Net Energy (Therms)	Remarks
Straw	17,090,000	181,310	9,348,100,000	
Green Fodder	3,841,100	187,410	1,035,100,000	
Vegetable and Cane-tops	1,336,880	53,473	2,431,650,000	
Cotton Seed	27,570	3,368	59,300,000	
Cake	159,400	59,879	261,110,000	
Bye-Products	447,500	50,256	614,970,000	
TOTAL ..	22,092,450	535,696	13,750,230,000	
Forest land (6,109,053)	2,727,000	20,730	1,368,000,000	
Culturable fallow land (14,004,505)	3,125,000	23,750	1,568,000,000	
GRAND TOTAL ..	28,754,450	580,176	16,686,230,000	

TABLE No. 2-A.

Available Nutrients for livestock population on utilising monsoon fallow and late paddy area.

	Bulk of Dry Matter (Tons)	Digestible Protein (Tons)	Net Energy (Therms)	Remarks
Straw, Green cake and Bye-products, Forest and Fallow land	28,754,450	580,176	16,686,230,000	
Green fooder on Monsoon fallow	2,305,000	212,900	2,212,000,000	at 25 mds. green per acre.
Bhoosa from Monsoon fallow	1,990,000	48,000	535,000,000	at 6 mds. air dry Bhoosa per acre.
TOTAL ..	33,049,450	841,076	19,433,230,000	
Lathyrus on late Paddy area (3,000,000 acres)	1,098,250	101,400	1,054,000,000	at 40 mds. green per acre.
GRAND TOTAL ..	34,147,700	942,476	20,487,230,000	

TABLE NO. 3

Shortage of Nutrients for total cattle Population in Uttar Pradesh.

	Bulk or Dry Matter (Tons)	Digestible Protein (Tons)	Net Energy (Therms)	Remarks
A				
When the requirement is calculated at standard recommendations.				
Net requirement	84,103,600	3,892,258	79,181,383,000	..
Available	28,754,450	580,176	16,686,230,000	..
Shortage	55,346,150	3,312,082	62,495,153,000	
Percent Shortage	65·8	85·1	78·9	..
B.				
When the maintenance is reduced for short size village cattle.				
Net requirement	58,870,400	3,032,718	61,762,200,000	..
Available	28,754,450	580,176	16,686,230,000	..
Shortage	30,115,950	2,452,542	45,075,970,000	
Percent Shortage	51·2	80·9	73·9	
C				
When 20 percent is deducted from maintenance for economy.				
Net requirement	47,096,320	2,631,598	53,633,248,200	..
Available	23,754,450	580,176	16,686,230,000	..
Shortage	18,341,870	2,051,422	36,947,018,200	..
Percent shortage	38·9	77·9	63·9	..

TABLE NO. 3—D.

When animals are fed at critical limit (4 *D P. and* 4 *lb.* S.E. *per* 1000—*lbs.*)

	Bulk or Dry Matter (Tons)	Digestible Protein (Tons)	Net Energy (Therms)	Remarks
Net requirement	47,096,320	2,145,887	45,303,638,000	..
Available	28,754,450	580,176	16,686,230,000	..
Shortage	18,341,870	1,565,711	28,617,408,000	..
Percent Shortage	28·9	73·0	63·2	..

TABLE NO. 4

Deficit of Nutrients when non-productive Animals (211810) *are graz ed in the forest.*

Net requirement	46,724,992	2,622,013	53,426,548,200	..
Available	28,565,450	578,736	16,591,230,000	..
Shortage	18,159,542	2,043,279	36,835,318,200	..
Percent Shortage	38·86	77·9	68·96	..

TABLE NO. 4 A.

Requirement at critical limit	46,724,992	2,138,718	45,155,441,000	..
Shortage	18,159,542	1, 559,982	28,564,211,000	..
Percent Shortage	38·86	72·91	63·23	..

TABLE NO. 5

Deficit of nutrients when 3,054,526 *dry animals are grazed in the forest*

	Bulk or dry matter (Tons)	Digestible protein (Tons)	Net Energy (Therms)	Remarks.
Net requirement	41,968,400	2,493,942	50,695,065,800	29,708,801 Animals considered.
Available	26,027,450	559,446	15,318,230,000	
Shortage	15,940,950	1,939,496	35,376,835,800	..
Percent shortage	37·98	77·6	69. 79	..
Requirement at critical limit	41,968,400	2,041,418	43,055,441,000	..
Shortage	15,940,950	1,481,972	27,737211,000	..
Percent shortage	37·98	72·63	64·41	..

TABLE NO. 6

Deficit of Nutrients when maximum number of animals (10280660) *are grazed in the forest.*

Requirement	33,042,352	2,044,655	42,027,996,600	2,248,2667 Animals left for feeding.
Available	22,902,450	5,35,696	13,750,230,000	..
Shortage	10,139,902	1,509,959	28,277,766,600	..
Per cent shortage	30·7	73·65	67·27	
Requirement at cirtical limit	33,042,352	1,794,318	37,707,441,000	..
Shortage	10,139,902	1,258,622	23,957,211,000	..
Per cent shortage	30·7	70·16	63·54	..

TABLE No. 7

Deficit of Nutirents when as many animals as are already grazing in the forest are considered

	Bulk or dry matter (tons)	Digestible protein (tons)	Net energy (Therms)	Remarks
Net requirement	44,895,200	2,511,600	51,184,000,000	31264702 animals left for feeding.
Availablet	27,416,450	570,006	16,015,330,000	
Shortage	17,478,750	1,941,594	35,168,670,000	
Per cent. shortage	33. 9	77·31	68·7	
Requirement at critical limit	44,895,200	2,047,500	43,239,000,000	
Shortage	17,478,750	1,477,494	27,223,670,000	
Percent shortage	38·9	72·1	62·94	

TABLE No. 8

Table showing the deficit of Nutrients by growing jowar on entire fallow land

	Bulk or dry matter (Tons)	Digestible protein (tons)	Energy (Therms)	Remars
Nutrients available :				
Jowar on fallow	18,007,500	387,910	18,762,000,000	Yield on plains has been taken as 3/5th of the normal and on hills as 2/5th of the normal.
Rest of forest	1,389,000	10,560	697,100,000	
Crops, etc.	22,902,450	535,696	13,750,230,000	
Total available	42,298,950	934,166	33,209,330,000	
Requirement	44,895,200	2,511,600	51,184,000,000	
Shortage	2,596,250	1,577,434	17,974,670,000	
Percent shortage	5·8	62·80	35·1	

TABLE No 8-A

Requirement at critical limit	do.	2,047,500	43,239,000,000
Shortage		1,113,334	10,029,670,000
Percent shortage		54·34	23·19

TABLE No. 9

Table showing the position of Nutrients by growing Kharif *fodders and oil seeds on entire fallow land*

	Bulk of dry matter (Tons)	Digestible Protein (Tons)	Net energy (Therms)	Remarks
Available from crop etc. at 50 percent increasd rate	34,347,135	803,283	20,018,020,000*t*	
Jowar (on fallow land (80,000,000 acres) fallow land) ..	10,982,500	219,660	11,022,000,000	
Til on fallow land (60,000,000 acres)	313,500	119,130	663,850,000	
From Forest	1,389,000	10,560	697,100,000	
Total available	47,032,135	1,152,633	33,000,970,000	
Requirement	44,895,200	2,511,600	51,184,000,000	
Excess or shortage	2,136,935	—1,358,967	—18,183,030,000	
Percent shortage or excess	4·8 Excess	—54·1	—35·52	

TABLE 9-A

Available	47,032,135	1,152,633	33,000,970,000
Requirement at critical limit	44,895,200	2,047,500	43,239,000,000
Shortage	2,136,935	894,867	10,238,030,000
Percent Excess or shortage	4·8 Excess	43·69	23·68

TABLE No. 10

Table showing position of Nutrients by growing fooders on fallow land

	Bulk or Dry wheather (Tons)	Digestible protein (Tons)	Net emergy (Therms)	Remarks
Avaiable from crops, etc. at increased rate	34,347,135	803,283	20,618,020,000	
From Forest	1,389,000	10,560	697,100,000	
From Jowar (60 lakh acres fallow)	8,237,500	164,800	8,305,000,000	
From Legume (60 lakh acres fallow)	11,370,000	1,862,000	12,360,000,000	
From rest of fallow	447,300	15,230	44,870,000	
Total avaialbe	55,790,935	2,855,873	42,024,990,000	
Requirement	44,895,200	2,511,600	51,184,000,000	
Excess or shortage	10,895,735	+344,273	9,159,010,000	
Percent excess	—24·28	13·71	3·1	

TABLE NO. 10-A

Requirement at critical limit	44,895,200	2,047,500	43,239,000,000	
Shortage	—10,895,735	—808,373	1,214,010,000	
Percent shortage	—24·28	—39·48	2·8	

TABLE No. 11

Yield of Nutrients per acre from different crops

FOOD CROPS	GREEN			GRAIN			STRAW		TOTAL PER ACRE		
	Dry matter (lb.)	Digestible Protein (lb.)	Net Energy Therms	Dry Matter (lb.)	Digestible Protein (lb.)	Net Energy Therms	Dry matter (lb.)	Digestible Matter (lb.)	Net Energy Therms	Dry Matter (lb.)	Digestible Protein (lb.)	Net Energy Therms
Rice	..	..	..	720	45·4	451	1,080	Nil	311	1,800	45·4	762
Wheat	..	..	..	810	68·9	685	1,620	Nil	389	2,430	68·9	1,074
Barley	..	..	..	771	60·9	622	1,542	13·9	364	2,313	74·8	986
Jowar	..	..	..	385	22·4	299	1,155	18·5	276	1,540	40·9	575
Bajra	..	..	..	366	28·6	331	916	14·7	219	1,282	43·3	550
Maize	..	..	..	758	56·1	682	1,895	41·7	512	2,653	97·8	1,194
Gram	..	..	..	511	58·3	399	511	11·2	55	1,022	69·5	454
Other Food Crops— ..	..	..	..	360	72·0	282	360	7·9	39	720	79·9	321
Oats-Grams after 1st Cut	2,050	215·7	1,025	295	20·9	209	738	6·6	172	3,083	243·2	1,406
Ground Nut	..	..	..	422	85·3	394	..	..	..	422	85·3	394
Food Crops—												
Jowar ..	5,125	102·5	2,307	..	..	..	..	..	..	5,125	102·5	2,307
Bajra ..	4,100	177·1	2,089	..	..	..	..	..	..	4,100	177·1	2,089
Maize ..	4,100	182·0	2,182	..	..	..	..	..	..	4,100	182·0	2,182
Lucerne ..	9,840	1737·0	4,428	..	..	..	..	..	..	9,840	1737·0	4,428
Berseem ..	4,305	579·8	2,440	..	..	..	..	..	..	4,305	579·8	2,440
Guar ..	3,075	163·6	812	..	..	..	..	..	..	3,075	163·6	812
Senji ..	4,100	410·0	1,558	..	..	..	..	..	..	4,100	410·0	1,558
Soyabean ..	2,563	327·9	1,343	..	..	..	..	..	..	2,563	327·9	1,343
Oats ..	4,100	431·3	2,049	..	..	..	..	..	..	4,100	431·3	2,049

TABLE No. 12

Requirement and availability of feeding stuff when a balanced concentrate mixture is fed leaving useless animals on grazing

Feeding stuff	For production		For maintenance		For Fallowers Bulls	Total	Available	Percent. shortage
	Milk*	Work	Milk	Work				
Straw	..	..	5,818,000	12,210,000	5,854,000	25,470	23,907,470	18,573,007	22·3
Green Feed	..	..	26,420,000	29,840,000	9,760,000	56,600	66,076,600	22,391,000	66·11
Grazing	..	..	13,210,000	14,920,000	4,880,000	28,300	33,038,300	19,507,000	41·05
Oil Cake	278,600	561,720	..	..	292,800	1,274	1,134,394	173,300	84·70
Maize	243,775	842,580	..	..	292,800	1,114	1,380,269	677,440	50·93
Barley ..	243,775	842,580	..	..	292,800	1,114	1,380,269	1,400,057	Nil.
Gram	243,775	280,860	..	..	292,800	1,114	818,549	1,273,508	Nil
Cotton Seed	243,775	Nil	..	..	..	1,114	244,889	30,160	87·7
Bran etc. ..	139,300	280,860	..	..	292,800	637	713,597	486,500	31·82
*Concentrate supplement for 50 percent. of cows milk and total buffaloes milk							5,671,967	4,040,965	28·80

TABLE No. 14

Table showing the requirement and availability of straw concentrate and green feed per head adult Cattle

32,763,327 heads of mixed population =27,129,652 adult unit.

Adult unit outside the forest 25,888,652 which are to be fed.

	Requirement (lbs.) per year, per day (Average)		Available (lbs.) per year per day (Average)		Percent. of required	Remarks
Straw	2,190	6	1,605	4·40	73·33	When no forest produce is taken into account.
	2,190	6	1,742	4·77	79·49	When produce of the rest of forest is utilised.
Green Feed	7,300	20	1,936	5·32	26·60	..
Grazing	3,650	10	900·7	2·47	24·70	..
Concentrate	365·0	1·0	349·3	0·95	95·0	For maintenance only.

SUB-APPENDIX III-B

TREND OF COW AND BUFFALO POPULATIONS IN UTTAR PRADESH (1899–1951)

Enumeration of livestock population was first undertaken in U. P. in the year 1899, and thereafter it was done quinquennially till 1909, Due to acute famine conditions the census due in 1914 was postponed for a year and thereafter the quinquennial census was resumed till 1935. On account of the Second World War, the next census due in 1940 was not taken up. Later, due to the exigencies of the war it was decided to undertake livestock census every year and accordingly census operations were taken in 1944 and 1945. After cessation of hostilities the previous practice of taking census every five years was resumed and the next census was accordingly taken in 1951.

Census returns of 1899, 1904 and 1915, furnish separate figures for adult cattle and buffaloes but separate figures for calves, including young stock at foot, have not been given. A combined enumeration of cow and buffalo calves was only undertaken. Thus, while trend in the variation of population of adult cows and its kind and buffaloes can be studied up to 1915, the trend in the variation of total cow (and its kind) and buffalo population cannot be assessed separately with accuracy. From 1920 onwards, the figures for cow and buffalo calves have also been furnished separately which renders it possible to compare the total cow and buffalo populations.

Though it has not been possible to lay hand on the census return of 1899, available records seem to indicate that between 1899 to 1904, the population of cows and buffaloes increased by about 6 to 16 per cent., in various categories under these two heads. The total cow and buffalo population in the State in 1904 stood at 3,11,91,065 and in 1909 it fell down to 2,96,07,194. The decrease was 51,83,924 i.e., about 5.08 per cent. Despite the famine in 1914 the census figure in 1915 showed an upward trend, the total populatoin recorded being 3,03,76,043 i.e., an increase of 7,68,902 or about 2.56 per cent. over the preceding census. Even this increase was not sufficient to restore the population to the level of 1904. Similar trend is noticable in the populations of practically each category, *viz.*, (*a*) bulls and bullocks, (*b*) cows, (*c*) male-buffaloes, (*d*) she-buffaloes, and (e) young stock in which there was an increase of 8 per cent., 8 per cent., 10 per cent., 6 per cent. and 6 per cent. rsepectively from 1899 to 1904, and there was a drop of 7,224 and 10 per cent., in the cases of bullocks, male-buffaloes, young stock and cows respectively from 1904 to 1909. In respect of the she-buffaloes, however, there was an exception as their population in 1909 showed an increase of about 2 per cent. over the population in the previous quinquennium i.e., 1904. The drop between 1904 to 1909 cannot be explained on the basis of any detailed data. It is presumed that it could be accounted for either due to epidemics or bad agricultural years—the error in collection of statistical data being common to all these years.

In spite of the acute fodder famine of 1913-14, the total cattle and buffalo population increased in 1915 by 7,68,902, i.e., about 2.6 per cent. over the preceding census but it did not regain the previous level of 1904. The increase in the various categories of cattle and buffaloes, *viz.*, (*a*) bulls and bullocks, (*b*) cows, (*c*) male-buffaloes, (*d*) she-buffaloes,

and (*e*) young stock was .71 per cent., 1.01 per cent., 23.1 per cent., 5.5 per cent. and 3.22 per cent. respectively. The increase in male-buffaloes was far greater than in any other category and it was attributed to the then prevailing high price of working cattle, which necessitated a much wider use of male-buffaloes for agricultural and transport purposes.

Census returns of 1920, 1925 and 1930 reveal further improvement in that the classification of young stock was split up into cow-calves and buffalo-calves and the enumeration of bulls and bullocks was also undertaken separately. Thus, from 1920 onwrds, it became possible to have comparable figures of total cow and buffalo populations under different categories.

A comparison of the total combined population of cattle and buffaloes reveals a drop of 6,22,279 in 1920, i.e., about 2.05 per cent. *vis-a-vis* that of the preceding census. This drop was spread over all the categories of cattle and buffaloes, excepting the male-buffaloes which again showed an increase of 7261. The decrease in bulls and bullocks, cows, and she-buffaloes was 3.47 per cent., 2.1 per cent. and 1.9 per cent respectively over the census figures of 1915. The drop in the population of young stock was .64 per cent. only.

In 1920, the total cattle and buffalo populations were 2,22,95,992 and 74,67,772 respectively. In 1925, these figures rose to 2,26,05,991 and 84,39,826 i.e. showed an increase of about 1.39 per cent. and 13.02 per cent. respectively. In the case of cattle, the population of bulls, cows and young stock dropped by 3.87 per cent., 0.43 per cent and .2 per cent. respectively but the population of bullocks increased by 3.28 per cent., as compared with the previous census figure. In the case of buffaloes, however, the position reversed inasmuch as there was a reduction of 6 per cent. in the population of male-buffaloes; the population of she-buffaloes and young stock on the contrary showed an increase of 13.24 per cent. and 18.0 per cent. respectively over the preceding census.

Next, the census of 1930 recorded an increase of 3,00,249 cattle and 1,12,766 buffaloes, i.e., 1.33 per cent. in each case. The increase was however, not uniform as male cattle and buffaloes registered a decrease of 10.8 per cent., 1.2 per cent. and .4 per cent., in bulls, bullocks and male-buffaloes respectively, but female and young stock registered an increase of 8 per cent. and 6.2 per cent. in the cases of cows and young stock (cattle) and .2 per cent. and 3 per cent. in respect of she-buffaloes and young stock (buffaloes) respectively. The increase in adult females was nominal but it was quite marked in the case of young stock.

Further improvement was effected in livestock enumeration in 1935 and several sub-divisions were made in the classification of cattle and buffaloes. The population was recorded separately under each species, according to age groups of males and females and in accordance with their utility. This census recorded a nominal increase of 1.2 per cent. in the total cattle population and substantial increase of 9.5 per cent. in the total buffalo population. The increase in the case of cattle was .6 per cent. in bulls and bullocks and 6.5 per cent., in young stock but the number of cows, showed a fall of 3.6 per cent. The increase under male-buffaloes, she-buffaloes and buffalo young stock in 1935 was 20.8 per cent. 4.0 per cent. and 11.2 per cent. respectively as compared with the previous census of 1930.

Owing to the outbreak of Second World War no census was taken in 1940. The large demand for cattle and buffaloes for slaughter during this period necessitated taking of a census of livestock population in 1944 both with a view to ensuring continuity of meat supply to the troops and conserving livestock essential for breeding purposes. The census return of 1944 showed a decline of 20,79,096 cattle and 7,68,973 buffaloes which work out to 9 per cent. and 8.29 per cent., respectively, over the census figures of 1935. The total decline was spread over the various classes of cattle and buffaloes as follows :—

While breeding bulls, male cattle over 3 years of age not used for breeding or work, young male cattle between 1 and 3 years of age, cows for breeding and milk production, cows not used for breeding or milk production and young female cattle between one and 3 years' age showed a decrease of 30 per cent., 14.7 per cent., 33.7 per cent., 7.0 per cent., 93.4 per cent. and 35.1 per cent. respectively, the working bullocks, young male and female cattle under one year of age registered an increase of 1.1 per cent., 9.0 per cent.,and .6 per cent. respectively. In buffaloes, only she-buffaloes kept for breeding and milk production registered an increase of 8.3 per cent. but all the remaining categories, *viz.*, buffalo-bulls, working male-buffaloes, male-buffaloes not used for breeding or work, young male-buffaloes between 1 and 3 years, young male-buffaloes under 1 year, adult she-buffaloes not used for breeding or milk production, female heifers between one and 3 years and female buffalo-calves under one year showed a decline of 86.2 per cent., 2.3 per cent., 59.3 per cent., 35.0 per cent., 14.6 per cent., 38.3 per cent., 22.2 per cent. and 14.2 per cent. respectively. Other significant features revealed by the 1944 census are that not only a very large part of the adult cows and she-buffaloes, not in use for work or breeding purposes were utilised for meat production, as out of 4,63,227 such animals in 1935 only 40,049 were left in 1944, but the number of breeding cows also diminished by over four lakhs. During the First World War the number of buffalo-bullocks kept for work had increased appreciably but during World War II their number decreased by 18,706 whereas the number of working bullocks increased by 1,07,680 in spite of much heavier rise in prices that was never touched in the previous War.

The 1945 census recorded an overall increase in populations of cattle and buffaloes, the increases being 6,43,711 and 5,32,878 or 3.05 per cent. and 6.25 per cent respectively. The increase in cattle was spread over practically all categories except those between one and three years of age, breeding bulls, bullocks and cows not used for work or breeding purposes which recorded a decline of 4.57 per cent., 6.16 per cent., 1.14 per cent. and 28.13 per cent. respectively. The increase was 13.57 per cent. in calves under one year 1.72 per cent. in males over 3 years, 5.11 per cent. in females over 3 years, 1.9 per cent. in working bullocks and 5.15 per cent in cows kept for breeding and milk production. In the case of buffaloes, breeding bulls, bullocks and she-buffaloes not in use for work or breeding, heifers between 1 and 3 years gave a reduction of 0.9 per cent., 6.3 per cent., 6.8 per cent. and 1.6 per cent., respectively, while stock under one year of age, male young stock between one and 3 years, working buffalo-bullocks and she-buffaloes registered an increase of 14.68 per cent., 9.9 per cent., 6.7 per cent. and 5.6 per cent. respectivly over the figurs of 1944.

The last census was undertaken in 1951. The population of cattle increased by 17,70,888 or 7.9 per cent and that of buffaloes by 1,94,367 or 2.15 per cent. over the census returns of 1945. Cattle under one year increased by 1.9 per cent., male-young stock by 3.6 per cent. working-bullocks by 11.5 per cent., breeding cows by 8.8 per cent., bullocks and cows not in use for work or breeding purposes by 3.5 per cent and 54.3 per cent. respectively. These increases were offset to a certain extent by a drop of 4.5 per cent. in heifers between one and 3 years, 25.8 per cent in breeding bulls, and 18.4 per cent. in cows over 3 years used for work only. In the case of buffaloes there was an all round increase except in calves under one year and young stock between one and three years, which recorded a decline of 5.8 and 11.7 per cent. respectively. In other categories, the increases were 44.1 in buffaloe-bulls, 16.7 per cent. in working buffalo-bullocks, 41.5 per cent. in bullocks not in use for work or breeding, 7.2 per cent in breeding she-buffaloes, 102.2 per cent in she-buffaloes used for work alone, and 35.6 per cent. in she-buffaloes not in use for work or breeding purposes.

TOTAL CATTLE

Conclusions.—(A) The trend in variation in total cattle population from 1899 to 1920, which covers a period of five enumerations, was of alternate rise and fall, but in four successive census of 1920, 1925, 1930 and 1935 a small increase was registered in the total cattle population each time. The increase was, however, not enough to offset the heavy decrease of 15 lakhs in 1909 to raise the population to the level of 1904 when it was at its highest. The census of 1914 recorded a steep fall of 21 lakh cattle, though increase has again been registered in the census returns of 1945 and 1951. The cattle population as recorded in 1951 census has exceeded the record of 1935 but is still less by about 4 lakhs as compared with the figures of 239 lakh cattle in 1904. Thus, position today is that during the course of 47 years intervening between the census of 1904 and 1951, the total cattle population has ultimately decreased by 4 lakhs instead of recording any increase. An increase of about thirteen lakhs is noticeable in the case of bulls and bullocks from 1899 to 1951, though it has been at the expense of the breeding cows in which the drop has been most pronounced as their number has decreased by about 8 lakhs during a period of 47 years. Bullock showed a phenomenal drop of 8,00,000 in 1909, of about 3½ lakhs again in 1920 and 1.3 lakhs in 1930. These reductions were not made good in full until 1951 when an excess of about five lakhs was recorded over the previous best figures of 1904.

(*a*) Cows recorded a noticeable drop of 6 lakhs in 1909 and continued to exhibit this tendency till 1944 except in 1915 and 1930 when slight increases were recorded. The censuses of 1945 and 1951 again showed an increase but not to an extent as would make good the previous reduction. One of the noticeable features, however, is that the number of cows and bullocks not used for work or breeding purposes has decreased from 4.38 lakhs in 1935 to 1.33 lakhs in 1945. A rising tendency in the population of such cattle (not useful for milk or work) has again been registered in the census of 1951 when these cattle have shown an increase of about half a lakh, which deserves as much notice as the drop in the number of breeding cows.

(*b*) *Buffaloes*—The total buffalo population has been generally showing a rising trend and the net result is that there is an appreciable increase of about 24 lakhs during a period of about 47 years though decreases have been noticed in 1909 and 1920 and in 1944 the last of which may be considered to be an abnormal year on account of the conditions created by the last War. All the decreases have, however, been made good during subsequent years. The maximum population registered in the case of buffaloes was 92.9 lakhs in 1935, and the 1951 census figure of 92.5 lakhs is short only by 40 thousand animals which is almost negligible. The number of adult she-buffaloes has steadily increased from 32.3 lakhs in 1899 to 49.87 lakhs in 1951, which is indicative of their economic utility and great preference shown to them by the cultivators. Even the census of 1944 revealed an increase of nearly 1.7 lakhs. The only reduction in their number was in the census return of 1930 which showed a fall of about sixty thousand as compared with the preceding census. This was attributable to the heavy mortality in the Meerut and Agra divisions resulting from the scarcity of fodder occasioned by the abnormally deficient rainfall in 1918-19.

The position of working buffalo-bullocks is likewise almost similar though there have been frequent falls in their population at intervals. Their population in 1899 was 7.8 lakhs whereas in the census return of 1951 it stands at 10.26 lakhs. The census of 1909 showed the minimum population (6.7 lakhs) of buffalo bullocks but at the next census the fall was nearly made up. The 1925 and 1930 census registered a drop of about half a lakh of buffalo-bullocks over the figure of 1920 but the 1935 census showed a figure of 9.1 lakhs which had never been reached before. There was also a fall of a little less than a lakh (.9) in 1944 but it has been made up and even exceeded in the subsequent census returns of 1945 and 1951. The last census of 1951 registers a figure of 10.26 lakhs buffalo-bullocks which is the highest recorded so far. The number of buffalo-bullocks and she-buffaloes, not used for work and breeding purposes has, however, declined from 1.17 lakhs in 1935 to only 28,000 in 1951.

	1899	1904	Difference from the preceding census (+ or —)	1909	Difference from the preceding census (+or —)	1915	Difference from the preceding census (+ or —)
1. Total cattle and buffalo population	2,90,83,173	3,11,91,065	+21,07,892	2,96,07,141	—15,83,924	3,03,76,043	+7,68,902
2. Total young stock (calves and buffallo calves).	84,92,373	90,01,916	+5,09,543	89,93,608	—8,308	22,80,783	+2,87,175
3. Total adult cattle buffalow.	2,05,90,809	2,21,09,149	+15,18,349	2,06,13,533	—15,75,616	2,10,95,260	+4,81,727
(*a*) bulls and bullocks ..	1,01,47,982	1,09,59,821	+8,11,839	1,01,84,312	—77,75,509	1,02,56,855	+72,543
(*b*) cows	64,33,125	69,47,775	+5,14,650	62,82,648	—6,65,127	63,45,836	+63,188
(*c*) Male-buff.	7,81,954	8,60,149	+78,195	6,71,672	—1,88,477	8,26,848	+1,55,176
(*d*) Cow-buffaloes ..	32,27,739	34,21,404	+1,93,665	34,74,901	+53,497	36,65,721	+1,90,820
Total cattle	2,22,35,080	2,39,09,512	+16,74,432	2,24,60,568	—14,98,944	2,26,02,691	+1,42,123
Total buffaloes	68,48,093	72,81,553	+4,33,460	71,46,573	—1,34,977	77,73,352	+6,26,779

NOTE—The total cattle and total buffalo populations have been worked out by dividing the total No. of young stock into cow and buffalo-calves seperately in proportion to the adult cows and she-buffaloes.

	1920	Difference from the preceding census (+ or —)	1925	Difference from the preceding census (+ or —)	1930	Difference from the preceding census (+ or —)
1. Total cattle and buffalo population ..	29,763,64	—622,279	31,045,817	+1,282,053	31,458,832	+413,015
2. Total young stock	9,220,964	—59,819	9,781,169	+560,205	10,269,039	+487,870
(*a*) Cow calves	6,183,527	—59,819	6,197,709	+14,182	6,578,946	+381,237
(*p*) Buffaloe calves	3,037,437	..	3,583,460	+566,023	3,690,093	+106,633
3. Total adult cattle and buffalo ..	20,542,800	—562,460	21,264,648	+721,848	21,189,793	—74,855
(*a*) Bulls	27,623	..	26,555	—1,068	23,669	—2,886
(*b*) Bullocks	9,873,84	—355,358 ..	10,197,540	+23,666	10,071,103	—126,437
(*c*) Cows	6,210,968	—134,868	6,184,187	—26,781	6,232,522	—48,335
(*d*) Male-Buffalo	834,109	+7,261	784,044	—50,065	780,984	—3,060
(*e*) Cow-buff.	3,569,226	69,495	4,072,322	+476,096	4,081,515	+9,193
Total cattle population	22,295,992	—306,699	22,605,991	+309,999	22,906,240	+300,249
Total buffalo population ..	7,467,772	—305,580	8,439,826	+972,054	8,552,592	+112,766

	1935	Difference from the preceding census (+or—)	1944	Difference from the preceding census (+or—)	1945
1	2	3	4	5	6
1. Total Cattle population	23,177,336	+271,096	21,098,240	—2,078,096	21,741,951
2. Cattle under one year of age	2,355,401	..	2,464,743	+109,342	2,799,353
(*a*) Male	1,133,101	..	1,235,041	+101,940	1,414,186
(*b*) Female	1,222,300	..	1,229,702	+ 7,402	1,385,167
3. Total cattle between one and 3 years	4,663,303	..	3,059,276	—1,604,027	2,919,332
(*a*) Male	2,347,722	..	1,557,238	—790,484	1,508,051
(*b*) Female	2,315,581	..	1,502,038	—813,543	1,411,281
4. Total adult cattle over 3 years of age	16,158,632	—168,560	15,574,221	—584,481	16,023,266
(*a*) Male	10,153,285	+58,615	10,230,709	+77,424	10,406,561
(*b*) Female	6,005,347	—227,175	5,343,512	—661,835	5,616,705
5. Breeding bulls i. e. males over 3 years kept or used for breeding purposes.	22,286	..	15,481	—6,805	14,682
6. Working bullocks i. e. bullocks and uncastrated males over 3 years kept for work only	9,971,462	..	10,079,142	+107,680	10,271,285
7. Bull and Bullocks over 3 years not in use for breeding or work (other bulls)	159,537	..	136,086	—23,451	120,594
8. Breeding Cows i. e. cows over 3 years kept for breeding or milk production	5,726,249	..	5,325,086	—401,163	5,599,151
9. Cows over 3 years used for work	..	..	Not available	Not available	4,252
10. Cows over 3 years not in use for work or breeding purposes	279,098	..	18,426	—260,672	13,302

		Difference from the preceding census (+ or−)	Percentage	1951	Difference from the preceding census (+ or−)	Percentage
		(7)	(8)	(9)	(10)	(11)
1	Total cattle population	+6,43,711	3·05	2,35,12,839	+17,70 88	7·9
2	Cattle under one year of age	+3,34,610	..	28,54,123	+54,770	1·9
	(*a*) Male	+1,79,145,	14·5	14,53,358	+39,172	2·7
	(*b*) Female	+1,55,465	12·64	14,00,765	+15,598	1·1
3	Total cattle between one and 3 years ..	−1,39,944	..	29,10,298	−9,034	·3
	(*a*) Male	−49,187	3·16	15,62,986	+54,935	3·6
	(*b*) Female	−90,757	6·04	13,47,312	−63,969	4·5
4	Total adult cattle over 3 years of age ..	+4,49,045	..	1,77,48,418	+17,25,152	10·7
	(*a*) Male	+1,75,852	1·72	1,16,28,371	+12,21,810	11·7
	(*b*) Female	+2,73,193	5·11	61,20,047	+5,03,342	8·9
5.	Breeding bulls i. e. males over 3 years kept or used for breeding purposes ..	−799	5·16	10,883	−3,799	25·8
6.	Working bullocks i. e. bullocks and uncastrated males over 3 years kept for work only	+1,92,143	1·9	1,14,54,742	+11,83,457	11·5
7.	Bull and bullocks over 3 years not in use for breeding or work (other bulls)	−1,15,492	1·14	1,62,746	+42,152	3·5
8.	Breeding cows i. e. cows over 3 years kept for breeding or milk production	+2,74,065	5·15	60,96,050	+4,96,899	8·8
9.	Cows over 3 years used for work	Preceding years not available.		3,476	−785	18·4
10.	Cows over 3 years not in use for work or breeding purposes	5,424	28·13	20,530	+7,228	54·3

	1935	Difference from the preceding census (+or—)	1944	Difference from the preceding census (+or—)	1945	Difference from the preceding census (+or—)
	2	3	4	5	6	7
1. Total Buffaloes	9,292,216	739,624	8,523,243	—768,973	9,056,121	+532,878
2. Buff. under one year age	1,849,879	..	1,584,830	—265,049	1,817,078	+232,248
(*a*) Male	703,274	..	600,587	—102,687	724,861	+124,247
(*b*) Female	1,146,605	..	984,243	—162,362	1,092,217	+107,974
3. Total buffaloes between 1 to 3 years of age	2,254,108	..	1,685,855	—568,253	1,711,232	+25, 377
(*a*) Male	533,392	..	346,621	—186,771	399,953	+53,333
(*b*) Female	1,720,716	..	1,339,234	—381,482	1,311,279	—27,955
4. Total buffaloes over 3 years of age	5,188,229	325,730	5,252,558	+64,329	5,527,811	+275,253
(*a*) Male	943,223	162,239	834,480	—108,743	887,603	+53,123
(*b*) Female	4,245,006	163,491	4,418,078	+173,072	4,640,208	+221,938
5. Breeding buffalo-bulls i. e. entire males over 3 years kept for breeding purpose	81,394	..	11,223	—70,171	10,455	—768
6. Working buffalo-bullocks i. e. bullocks and uncastrated males over 3 years kept for work only	828,304	..	809,598	—18,706	865,621	+56,023
7. Buff.-buls and bullocks over 3 years not in use for breeding work (other buls)	33,525	..	13,659	—19,866	11,527	—2,132
8. Breeding buff.-cows i. e. over 3 years kept for breeding or milk production ..	4,060,877	..	4,396,455	+335,578	4,623,512	+227,057
9. Buff.-cows over 3 years used for work only.	..	..	..	7,681	..	..
10. Buff.-cows over 3 years not in use for work or breeding purpose	184,129	..	21,623	—162,506	9,015	—12,608

	Percentage	1951	Difference from the preceding census(+or—)	Percentage.
	8	9	10	11
1. Total Buffaloes	6·2	9,250,488	+194,367	2·1
2. Buff. under one year age		1,710,156	—106,922	5·8
(*a*) Male.	17·6	648,323	—76,538	1·5
(*b*) Female	9·4	1,061,833	—30,384	2·8
3. Total buffaloes between 1 to 3 years of age ..		1,520,627	—200,605	11·7
(*a*) Male	9·9	362,798	—37,155	9·2
(*b*) Female	1·6	1,147,829	—163,450	12·4
4. Total buffaloes over 3 years of age	5·6	6,029,705	+501,894	9·04
(*a*) Male	5·6	1,041,806	+154,203	17·4
(*b*) Female	5·2	4,987,899	+347,691	7·5
5. Breeding buffalo-bulls i. e. entire males over 3 years kept for breeding purposes	·9	15,170	+4,715	44·1
6. Working buff.-bullocks i. e. bullocks and uncastrated males over 3 years kept for work only	6·7	1,010,330	+144,709	16·7
7. Buff.-bulls and bullocks over 3 years not in use for breeding work (other bulls).	6·3	16,306	+4,779	41·5
8. Breeding buff.-alo cows i. e. over 3 years kept for breeding or milk production	5·6	4,960,136	+336,624	7·2
9. Buff.-cows over 3 years used for work only		15,535	+7,854	102·2
10. Buff cows over 3 years not in use for work or breeding purposes	6·8	12,228	+3,213	35·6

APPENDIX IV

Report of the Cattle improvement Sub-Committee

I. *Constitution of the Sub-Committee.*—The Cattle Improvement Sub-Committee was constituted in accordance with the decision arrived at the first meeting of the Gosamvardhan Enquiry Committee held on July 29, and 30, 1953 in the Vidhan—Bhawan, Lucknow under the Chairmanship of Dr. Sita Ram, former High Commissioner for India in Pakistan and inaugurated by the Chief Minister Pandit Govind Ballabh Pant.

The personnel of the Sub-Committee was as under :—

1.	Rai Bajrang Bahadur Singh, M.L.C.,	*Chairman.*
2.	Sri Gopal Shastri,	*Member.*
3.	Sri L. D. Asthana, M.L.A.,	"
4.	Sri Suresh Prakash Singh, M.L.A.,	"
5.	Sri Ram Naresh Shukla, M.L.A.,	"
6.	Sri Raja Ram Shastri, M.L.C.,	"
7.	Swami Bhaswarananda Ji,	"
8.	Sri M. J. Mukerjee, M.L.C.,	"
9.	Sri N. K. Bhargava, Dairy Development Officer,	*Secretary* (Subsequently resigned).

II. *Functions of the Sub-Committee.*—The Sub-Committee was allotted the following functions :—

(i) To report on the cattle breeding work done in the State and suggest methods of improvement, and (ii) inspection of selected centres and institutions in the State including the Indian Veterinary Research Institute.

III. *Review of the implementation of the recommendations of the Bhadri Committee.*—Although the functions allotted to the Sub-Committee appear to be very few, yet when the Sub-Committee has to report on the work done so far and suggest methods of further improvement, it almost covers the entire field of Animal Husbandry. Efforts have, however, been made to present the report in as condensed a form as possible.

The problem of cattle improvement can be divided into four parts and the review of each individually will give the correct picture. They are—

(i) Breeding,

(ii) Nutrition,

(iii) Disease Control, and

(iv) Surplus stock.

The nutritional aspect would be taken care of by the Nutrition and Dairy Sub-Committee in detail. This Sub-Committee has, therefore, dealt only with the broad points on the subject.

In order to appreciate correctly the present postion in respect of cattle improvement work carried out in U. P. the Members acquainted themselves with the progress made in regard to the implementation of the relevant detailed recommendations made by the U. P. Animal Husbandry Re-Organization Committee appointed under the Chairmanship of Rai Bajrang Bhadur Singh, M.L.C., Raja of Bhadri *vide* G.O. no. U.O. 739|XIID-399|1946, dated 9th January, 1947. The report of the Sub-Committee has accordingly been split into two parts—part I dealing with a brief review and part II with the report proper.

PART I (REVIEW)

1. The Committee is emphatic that the Cattle Breeding and other Livestock work should be tackled by the Animal Husbandry Department and the Plant Husbandry by the Agriculture Department.	This is being done now.
2. The Committee has divided this province into 9 zones for the allocation of Cattle Breeds to meet the demands of the public. The Committee has taken into consideration the climatic condition, rainfall, vegetation and soil while doing the above division.	This allocation of breeds has been enforced in the State with minor adjustments with the approval of the U. P. Board of Animal Husbandry and Fisheries. But the Sub-Committee is of the view that in view of the experience obtained and the present conditions of the different zones, certain changes will be necessary. A cattle breeding farm has already been established at Arazi Line (Banaras) for the far eastern tract and another at Kalsi (Dehra Dun) for the Hill tract. In other tracts, State Cattle Farms were already in existance. Besides, additional farms at Andeshnagar in Kheri district and Saidpur in Jhansi district have been established.

Zone	Tract	Breed	Location of farm
I	(Hill Tract) ..	Sindhi—Murrah	A farm somewhere 5,000 ft. above sea level.
II	(Western Tarai Tract	Ponwar—Tarai Buffaloes	Hempur Farm should breed Ponwar
III	(Eastern Tarai Tract)	Kherigarh—Tarai Buffaloes	In addition to Manjhra (Lakhimpur), a farm somewhere in Deoria should be opened.
IV	(Western Tract) ..	Hariana—Murrah Buffaloes	Madhurikund and Babugarh (Meerut) are sufficient.
V	(Western Middle Tract.)	Medium sized Hariana	Murrah buffaloes should be allocated to western region except to the districts of Etawah and Kanpur.
VI	(Eastern Middle Tract).	Sahiwal—Murrah Buffaloes	1. Niblet (Barabanki) and 2. Bainti (Pratapgrah) are sufficient.
VII	(Far Eastern Tract)	Shahabadi or Gangateri Murrah Buffaloes	A farm should be opened somewhere in this area.
VIII	(Vindhya Tract)	Sindhi-Bhadawari buffaloes	Naini Farm (Allahabad) will do.
IX	(Bundelkhand Tract)	Kankatha—Bhadawari Buffaloes	Bharari Farm (Jhansi) is sufficient in this area.

3. Breeding bulls should be issued on contributory basis as is the practice at present.

This is being done, but the contribution money has been raised from Rs.30 to Rs.50 per bull since February, 1954. There has been a demand for the revision of the present rate of contribution and bringing it back to the previous amount of Rs.30.

4. In issuing bulls preference should be given to the development blocks.

The order of priority followed by the Department in respect to the distribution of bulls is (i) Cattle Breeding Farms, (ii) Key Village Blocks, (iii) Community Project areas and other development blocks and (iv) other areas.

(*a*) Scrub bulls should be castrated and pedigree bull issued in lieu thereof.

This principle is already being followed as far as possible particularly in the Key Village blocks depending upon the number of approved bulls available.

(*b*) All the bulls should be changed after every three years to avoid in-breeding.	On the State Farms, systematic breeding policy is now being followed and an attempt is being made to use young bulls for a short period and then send them out in Key village blocks for Artificial Insemination work and those that prove to be capable of transmitting good qualities to the progeny are brought back to the farm for service. In the villages, due to the limited number of approved bulls scattered over a wide area, there is not much risk of in-breeding at the present moment but this fact is being kept in mind at the Artificial Insemination Centres where, however, there are at least 2 bulls of any particular breed kept at each centre by which the sire daughter mating can be avoided.
5. Breeds allocated should strictly be adhered to.	This is being done and any change is brought into force only after the approval of the U. P. Board of Animal Husbandry and Fisheries.
6. Rs.15 p.m. should be given to Darindas of well maintained pure-breed bulls.	Since there is a great demand for bulls even without such a financial aid and now that village Panchayats are being entrusted with the care and maintenance of bulls, it was not considered necessary to give this financial aid. Moreover, the number of the bulls issued is so great that the amount of such an aid would have totalled a huge amount which the Government would not have found convenient to provide.
7. All Government bulls should be inspected by District Livestock Officers.	This is being done by the Veterinary Assistant Surgeons and the District Livestock Officers in the course of their normal tours.

8. Artificial Insemination Centres should be opened to meet the shortage of pure-bred bulls.	Artificial Insemination Centres have already been established in the State.
9. Farms should be stocked with Animals.	Government have purchased 1,328 pure-bred cows of the various approved breeds such as Hariana, Sahiwal, Gangateri etc., 874 pure-bred she-buffaloes (Murrah and Bhadawari) for the foundation stock at the various State Cattle Farms. The Sub-Committee feels that there should be some system by which a certain number of animals of specified quality are purchased annually for Government Farm at a remunerative price. This will not only bring fresh blood to the farm but will also encourage the breeders too.
10. Farms which are to form the nucleus of breeding should be stocked with 100—280 of pure pedigreed cows according to the availability of land.	This is already being done and a Key Village Block has been formed around each of the State Cattle Breeding Farm where suitable facilities exist.
11. A ring of 1 to 5 miles around the farm should be chosen containing sufficient cows to be covered by the bulls obtained from the cows at the farm.	This is covered by the above recommendation.
12. Half-bred bulls should be issued from this ring to the development blocks, gaushalas and private breeders to lay the foundation stone for further improvement.	This recommendation is also being followed.
13. Extra heifers and old cows from the nucleus farm should be disposed of by auction.	This is being done and the heifers and surplus cows are disposed of by auction giving priority to the Key Village workers.
14. The private farms of Bainti (Pratabgarh) and Naini (Allahabad) should either be subsidised, or some other arrangement be made in consultation with the proprietors for producing pure pedigreed animals.	This is already being done.

15. Farm should grow their own fodder, for the consumption of the livestock at the farm.	This is being done at practically every State Cattle Breeding Farm as far as possible.
16. Cattle Breeding should be the main and primary feature of these farms.	This is so and every effort is made to cover the loss on the livestock side from the profit on the agricultural side. This will have to be done till the present strains of our cattle are developed to be economical. In order to achieve this, upgrading with the establishment of foreign dairy breeds on selected farms with clear idea of the type to be developed, will have to be resorted to.
17. The Deputy Director-incharge of these farms should be a veterinarian, preferably a MRCVS, with farm experience.	Due to shortage of Veterinary Officers in the State, it has not been possible to implement this recommendation so far nor it appears likely that it would be impelemented for some time to come.
18. These farms should breed and rear other livestock in addition to cattle.	This is being done.
19. One farm in each cattle breeding zone should have Sub-Nutrition Research Station.	It has not been possible to implement this recommendation so far due to lack of funds and staff required for the purpose, but the Research Officer (Animal Nutrition) is consulted by each farm in respect of their livestock feeding problems. It would be worthwhile if the Research Officer is given an apportunity to visit the farms once a year, study the conditions on the spot and collect samples for analysis.
20. The surplus area at the farm may be utilised for growing pedigree seeds.	This is being done.

21. The two quarantine sections should carry on the quarantine work.	They are being used for the maintenance of young bulls till they are issued to the field. The system of rearing all the young bulls together till issued is not giving very satisfactory results. It is considered that much better results will be achieved if the bulls are reared with cows for which it would be necessary to let the selected herds of the surrounding villages come in contact with the young bulls regularly and frequently.
22. All the farms having an area of over 500 acres should be managed by gazetted (Junior scale) officer.	This has already been implemented.
23. All farms should run on commercial lines.	This objective is always in the forefront. But the amount of Agricultural Income Tax that would have been imposed on such a private farm is not taken into account. This should be done to determine the correct financial position and to devise methods to make such a farm pay even after paying the taxes.
24. The post of Disase Control Officer (Poultry) should be abolished.	This post has since been held in obeyance.
25. The Committee approves the staff as mentioned in the Mechanization Scheme for the seven farms.	No comments needed.
26. Artificial Inseminition Centre should be opened in different parts of the province.	Artificial Insemination Centres have already been established in different parts of the State. The Sub-Committee is of the opinion that for breeds of which bulls are available in sufficient numbers, Artificial Insemination Centres should not be increased. For instance, in the western districts every villager desires to have a 'Bijar' of his own. There is a keen competition as to which

	village possesses a better bull. Moreover, Hariana bulls are also available in sufficient number. Therefore, in western districts village Panchayats should be encouraged to keep their own bulls of desirable qualities.
27. The influence of synthetic thyroprotein, synthetic cestrogens and iodinated casein on the increase of milk production and butter fat in buffaloes and cows should be investigated.	This problem is receiving the attention at the Live-stock Research Station, Mathura.
28. Physiological genetics of buffaloes should be studied with a view to evolving a train that could bear more heat conveniently and its males may prove to be better draught animals.	The Bhadawari buffaloes which are light coloured can stand the rigors of heat much better than the jet black buffaloes. Detailed study in the physiological genetics has not yet been taken up at the Livestock Research Station, Mathura.
29. Progeny test for the stud animals maintained on the Government Farms should be introduced.	With the establishment of Artificial Insemination Centres at most of the farms necessity for progeny testing has been emphasised which has been introduced at all the important State Farms e.g., Babugarh, Madhurikund, Chak Ganjeria etc.
30. Breeding records of animals maintained on the Government Farms should be investigated with a view to determine those lines which should be preserved with.	The Animal Geneticist, U. P. has made a study of the breeding records of the animal maintained at the various farms and has tendered his advice to the Farm Managers concerned as and when necessary. The Sub-Committee feels that this requires still more attention.
31. Manufacure of Harmones and Pregnancy diagnosis in mares should be undertaken.	This item is being tackled by the Livestock Research Station, U. P. In the field, however, pregnancy diagnosis is made by rectal exploration.

32. Efforts should be made to evolve a suitable breed of cow of dual purposes in the Tarai District by crosses between Kherigarh or Ponwar and Sindhi or Sahiwal.	The recommendation has not yet been implemented by the Livestock Research Station. Due to the growing popularity of buffaloes both for milk as well as for draught in the Tarai, Ponwar and Kherigarh breed of cattle both of which used to be very popular once are being discarded progressively year by year. It is, therefore, essential that this experiment is not delayed any longer particularly when the few accidental crosses between Sahiwal and Kherigarh have proved such outstanding draught animals on the M. S. F., Manjhra. (Lakhimpur Kheri).
33. Arrangement should be made to test the draught capacity of an Indian bullock.	This work has not been taken up. A similar scheme is said to be functioning under the auspices of the Indian Council of Agricultural Research, the results of which have not yet been made available to the general public.
34. (ii) *Animal Genetics Section.* This section should continue its work at Mathura.	This is being done.
35. The post of the Animal Geneticist should be raised to senior scale.	This has been done.
36. Two Assistants with two trained stockmen should help the Animal Geneticist.	Already done.
37. This section should guide all the Artificial Insemination Centres of the province.	Already being done.
	B—DISEASE CONTROL
38. 500 stockmen should be trained every year for the next five years.	Stockmen have already been trained following this recommendation and at present there are two batches of 60 each who will

	be completing the course very shortly. From next year it is proposed to admit a batch of 90 students for whose training proper arrangements have been made at the Chak-Ganjeria Farm including the construction of a Hostel for them.
39. 100 candidates should be admitted in the Mathura College of Animal Husbandry and Veterinary Science instead of 60 per year for the next five years.	From the Session commencing from July, 1953 the number of candidates admitted to the U. P. College of Vety. Science and Animal Husbandry has been raised from 60 to 100.
40. Biological Products should considerably be expanded as suggested by the Committee to augment the production of the sera and vaccines which will be required to carry on the prophylactic vaccination as recommended by the Committee.	The Biological Products Section is already in the process of expansion and the services of an F. A. O. Expert have been requisitioned for equipping the Section with Edward Freeze Drying Unit and effecting other improvements.
41. Facilities for storing sera & vaccine should be provided at the District Headquarters Veterinary Hospitals by supplying these hospitals with Frigidaire or Electrolux and Sera pits.	Facilities for the storage of sera and vaccines in the shape of fridigidaire and serum pits have already been provided at most of the district hospitals all over the State with a view to bring these products within the easy reach of the field staff.
42. The post of the Veterinary Investigation Officer and Assistant Disease Investigation Officer (Poultry) should be provincialised and new post of Assistant Disease Investigation Officer (Sheep and Goats) be created.	The post of Vety. Investigation Officer has been provincialised, the post of Disease Investigation Officer (Poultry) has been amalgamated with that of the Poultry Development Officer and a new post of Assistant Disease Investigation Officer (Sheep and Goats) has already been created.
43. Printed Service Post-cards should be provided to each Development Block, village lambardars and Patwaris, etc., for prompt reporting of,	This practice is already in vogue.

the contagious disease to the nearest Veterinary Assistant Surgeon or Stockman.

44. Contagious disease Bill submitted by the Animal Husbandry Department should also provide for :—

(*a*) Compulsory prophylactic inoculation for all the livestock against the scheduled diseases as classified by the Contagious Diseases Bill already submitted by the Animal Husbandry Department.

(*b*) For segregating the reactors of Tuberculosis, Johne's Disease, Brucellosis to the nearest Gaushala, Concentration Camp.

(*c*) A ban should be imposed on the inter-provincial movements of the livestock unless they produce the certificate of inoculation against scheduled diseases.

An Animal Contagious Disease Bill has already been submitted to Government and is receiving their consideration.

45. (*a*) To establish Quarantine Stations at each of the Inter-Provincial routes in the 20 districts which will be in the charge of a stockman.

(*b*) The V. A. S. may issue inoculation certificates to the animals going outside the province.

The Government have already sanctioned the establishment of 11 quarantine stations—7 on the upward march and 4 on the downward march for the U. P. hills. Their extension to other parts of the State adjoining the neighbouring States will be undertaken on the experience of working of the aforesaid quarantine stations.

46. The Stockmen-in-charge of Development Block should see that the animals are inoculated at the right time in his block.

This is already being done by the field staff and mass immunisation compaign has been introduced in a systematic manner taking 10 districts every year so as to cover the entire State within a period of five years.

47. The Stockman-in-charge of the block should maintain a record of the animals and newly purchased stock in his block and to see that the dead animals are either burried or cremated.	It has not been possible to implement this in the fullest measure all over the State due to acute shortage of staff. This has, however, been introduced in the Key Village Blocks. Proper burial or cremation of dead animals is undertaken in the event of deaths from contagious diseases.
48. A thorough survey of Parasitic diseases to be carried out especially in badly affected areas of Tarai, Eastern districts and other damp and low lying areas.	These recommendations are being implemented in respect to sheep only. Their extension to cattle except what is being done under the Liverfluke Scheme in Almora District has not materialised for want of funds and facilities.
49. Regular use of Parasiticides and dipping of all the animals specially in Tarai, Eastern districts and other damp and low lying areas.	
50. A thorough survey of Nutritional diseases to be carried out specially in Tarai, Eastern districts and other localised centres where good and healthy cattle when migrated deteriorate in size and capacity for work as well as in milk production.	It has not yet been possible for the Animal Nutrition Section of the Livestock Research Station, U. P., to undertake the survey which required special staff. *The Sub-Committee feels that in view of the vast development of the Tarai in recent years, it is essential that this work be undertaken now without delay.*
51. One stockman should be incharge of 50 villages.	The number of stockmen has since considerably increased and with the appointment of Village Level Workers as multi-purpose hands in the rural areas and the continued training of stockmen it is hoped that the target will be achieved in due course.
52. One Veterinary Assistant Surgeon should be provided for each	There has been slow progress in the establishment of new

hospital in district, tehsil and pargana.	Veterinary Hospitals mainly for want of Veterianry Graduates. When Veterinary Graduates from the Mathura Veterinary College become available in adequate numbers it is hoped that the Government will give priority to this most vital aspect of Animal Husbandry development since it is the Veterinary Hospital from where all the Animal Husbandry activities radiate.
53. One District Livestock Officer should be incharge of one district.	This has already been done.
54. All District Livestock Officers should be of Gazetted rank (Junior Scale).	It is hoped that the number of gazetted District Livestock Officers will increase gradually.
55. Veterinary Inspector should be replaced by District Livestock Officers.	This has already been done.
56. There should be 5 circles of Deputy Directors of Animal Husbandry instead of four. The 5th one should have its headquarters at Jhansi.	Fifth Animal Husbandry Circle has already been created with its Headquarters at Gorakhpur.
57. Each Deputy Director should have at his Headquarter a Veterinary Assistant Surgeon, a Veterinary Inspector and a Poultry Inspector to help him.	At each Deputy Director's headquarter a Gazetted District Livestock Officer and a Senior Poultary Inspector and a Laboratory Veterinary Assistant Surgeon have now been posted to assist him.
58. Each circle officer should have complete administrative, technical and financial control over his circle.	The Circle Deputy Director already exercises such control over his Circle under the overall control and guidance of Director of Animal Husbandry.
59. The Headquarters of the V. I. O. be shifted to Mathura.	These recommendations have already been implemented.
60. His post should completely be provincialised.	
61. He should be raised to a Class I Officer (Senior Scale).	

62. This section should be transferred to Mathura as soon as the buildings are available.	In view of the existing buildings and laboratory facilities available at Lucknow which is centrally situated to enable quick distribution of sera and vaccines all over the State it has been considered advisable not to shift this section.
63. The B. P. O. should be raised to a class I officer (Senior Scale).	
64. He should be assisted by two officers of gazetted junior scale, incharge of serum and vaccine production respectively.	These recommendations have already been implemented.
65. Three Veterinary Inspectors and 4 (four) Veterinary Assistant Surgeons in addition to Laboratory Assistants should help in production of sera and vaccine.	
66. The basic qualifications for the stockman should be raised to High school instead of Vernacular Middle.	Although this has not been done so far as yet a good number of candidates seeking admission to this course are matriculates whose number is expected to increase every year.
67. The period of training should be extended to one year instead of 6 months.	This has now been done.
68. A new syllabus should be prepared according to I. C. A. R. with a few minor alterations to suit the conditions of the province.	This has been already done and multi-purpose training as prescribed by the Planning Department is also being given to them.
69. Stockmen should also receive training in first aid to human beings including preventive inoculation as in C. P.	The District Health Officer gives many lectures and practical training to the Stockmen class in these subjects.
70. The training of stockmen should not be imparted at the urban but in rural areas.	Stockmen training class will in future be held at Chak-Ganjeria Farm which is in a rural area and provides ample facilities for train-

	ing on various aspects of animal husbandry.
71. The number of stockmen to be trained every year should be 500 for the next five years.	Please refer to item no. 38. The number of stockmen to be trained should as far as possible be according to the number of vacancies that exist in the Department as they have very little scope for employment elsewhere.
72. The pay of the stockmen should be at par with those of the trained veterinary compounders.	Now that the Course has been raised from 6 months to one year the question of enhancing the scale of pay will be taken up with the Government.
73. A junior scale gazetted Officer with 10 Veterinary Inspectors under him should be made responsible for the training class.	Due to the limited number of stockmen to be trained and the shortage of Veterinary Officers in this department, it has not been possible to implement this recommendation.
74. The details of the syllabus should be decided by the department.	This has already been done.
75. No hospital should be allowed to keep untrained veterinary compounders.	All the untrained compounders have already been trained and necessary instructions have been issued for future guidance.
76. The training of compounders should be started at once at Badshahbagh till facilities for such training are available at Mathura.	Compounders' training classes were started at the stallion Depot, Moradabad, where necessary facilities were available.
77. The basic qualificaions for the candidates should not be less than High School.	The same basic qualifications being enforced for the compounder's training class as for the stockmen, *viz.*, Hindustani Middle or VIII standard although Matriculates are also coming forward for this post and it is hoped that it will be possible to stick to this condition before long.

78. The training period should extend for one year instead of three months	The ordinary course of training for Compounder has been extended to six months.
79. The training should be of high standard.	The training of requisite standard is imparted according to the prescribed syllabus.
80. Till the next five years to come the College should turn out 100 students every year.	It is hoped that with the increase in the number of admissions from 60 to 100 in the Mathura College, the number of graduates coming out from the College will proportionately increase in due course.
81. The V. A. S's. in the Department who have had no training in Animal Husbandry should be sent for three months' Refreshers Course in the college.	For want of accommodation and facilities it has not yet been possible to start the Refreshers' course in the College.
82. No candidate should be promoted unless he is a Post Gaduate.	In view of the increased number of vacancies that have occured due to the expansion of the Department and the limited number of admissions to the Post Graduate Course it has not been possible to adhere to this principle. Every effort will however, be made to get them trained as and when seats are available.
83. Efforts should be made to provide Post Graduate training at Mathura College till then they may be sent to IVRI Mukteshwar or Izatnagar.	This is being done.
84. Arrangements should be made for advance training in subjects like, Pathology, Bacteriology, Parasitology, etc., at the Veterinary College, Mathura, till then the candidates may be sent to foreign countries.	In the absence of facilities at the Mathura College the candidates are being sent to the IVRI and some members of the Departmental staff have gone abroad at their own expense.

85. Arrangements should be made for the trining of Compounders at the College.	These have not been implemented so far for want of accommodation and facilities.
86. Post-Graduate training classes should be established.	
87. Advance training leading to research work should be organised.	Steps have already been taken by the Agra University to institute such courses at the Mathura College.
88. Candidates should be coached for doctorate's degree in Vety. Science, Animal Husbandry and dairying.	
89. The staff as sanctioned in G. O. No. 1277-C|XIID-302 (25-1946, dated June 4, 1947 should be put into effect as and when required.	The college has been established and necessary action taken in the matter by the Principal.
90. The pay of the Professors should be brought down at par with those of Deputy Directors of Animals Husbandry.	This has been done.
91. The Demonstrators at the College should receive Rs.25 as special allowance in lieu of other facilities available in the field.	Although no special allowance has been sanctioned for the Demonstrators yet they have had to take advantage of obtaining the B. V. Sc. degree by attending the Condensed Course while still continuing in service and thereby getting into the next higher scale of pay in Group I.
92. The services of Deputy Directors and Professors should be inter-transferable.	This is being done in rare instances. The Sub-Committee feels that this should be practised more frequently to enable the teaching and the field staff to have practical experience of both.

PART II (REPORT and RECOMMENDATIONS)

The Sub-Committee very much appreciated the fact that such a large percentage of recommendations of the Animal Husbandry Re-organisation Committee have already been implemented, quite a few are under consideration for being implemented, and only a few cannot be implemented due to the changed conditions. The Sub-Committee, however, felt that one

important point of the report has not received the attention it deserved, i.e., private breeders and farmers were utilised for breeding and improving livestock as much as they could and should have been.

IV. *Meeting and inspection of the institutions.*—Having armed itself with necessary details regarding the progress and the development of the Animal Husbandry work in the State the Sub-Committee next went round the various institutions and contacted the officers-in-charge and also various other private breeders, non-officials interested in the work and local leaders.

Free and frank discussions took place regarding the work that has been accomplished so far and the vast amount of work that still remains to be achieved. This exchange of views has been particularly helpful to the Sub-Committee in sizing up the problem connected with the Cattle improvement.

The Sub-Committee visited the following places :—

Lucknow—7th and 8th October, 1953.

Co-operative Milk Collecting Depot., Dahla.—The Sub-Committee was surprised to see that the vast majority of the milch animals were buffaloes. In fact there were only two cows. The people assembled there frankly admitted that they were not interested in keeping cows because they had no milk. The Milk Union has done useful work in encouraging people to keep milch animals, but no concentrated efforts were made to improve the lot of the cows. Furthermore, the Union has diverted its attention by taking up other works such as dispensaries, oil crushers and other social works which had no direct bearing on the milk industry. *The Sub-Committee felt that the earnings from milk should essentially be utilised for increasing the production of milk particularly when the country was in need of so much more milk.*

A shocking statement was made by the people assembled there that no body was prepared to give their old and useless animals free to be sent to the Concentration Camps. What they do to such animals was not correctly revealed. They are either sold to the 'Veoparis' as in the western districts or let loose to find food for themselves till they die and give some return to the owner as sale proceed of their hide.

Chak-Ganjeria Farm.—At the time the Sub-Committee visited this place it was being built for concentrating all the Animal Husbandry work and making it truly a mixed farm. It was very gratifying to see the genuine effort that was being made. The stock of the cattle and buffaloes is mostly purchased. This farm has yet to go a long way to achieve its objective. The officers concerned have very clear picture of what they have to achieve and there is little doubt about their success if of course this enthusiasm is kept up for the period it is necessary to achieve results in a cattle breeding enterprise.

Military Dairy Farm.—This farm should, purely from the point of view of livestock, be an eye opener for the people who doubt that cows cannot compete with buffaloes. The farm consists of the pure-bred Sahiwals from the famous Ferozpur herd, graded Sahiwals that have various percentages of foreign blood of different dairy breeds and are now being graded up exclusively by pure-bred Sahiwals. The stock of baffaloes is mostly Murrah ; majority of them have been purchased from the open market.

It is the unanimous opinion of the authorities on the farm that the cows are definitely more economical and higher yielder than the buffaloes are. They were also of the opinion that cross-bred animals having foreign blood as high as 75 per cent can stand climate even of the planes and there is no difference whatsoever between the pure-bred Indian cattle and cross-bred cows as well as bullocks that have less than 50 per cent of foreign blood.

Lakhimpur, Bareilly and Naini Tal—12th to 18th October, 1953.

Mechanised State Farm, Manjhra.—This farm has got the Kherigarh breed of cattle which, once upon a time, were extremely popular and considered excellent trotting animals. Unfortunately due to the changed conditions and modern means of transport having crept in even into the interior and the vast popularity of buffaloes they are going out of favour so much so that if and when any stock is culled from this farm there is no market for them. There are also Tarai buffaloes on this farm and poor yielders as they are, they seem to have better resale value than the Ponwars have. The effort to milk the cows of Kherigarh breed and to increase milk by selection has so far produced no results. The process is so slow and the time so short that it appears that any effort in this direction will be a waste of time. Due to the sugar mills being established in this area there is a demand for heavy draught animals with the result that there is no demand for the bulls of Ponwar breed ; people want either Harianas or buffaloes.

One interesting experiment as a result of accident is the cross between Kherigarh and Sahiwals. There are no cows but the few pairs of bullocks that are there are supposed to be the best draught animals the farm people have ever handled anywhere. They are fairly fast and pull tremendous loads. They pull the plough and the load which no buffaoes or bullocks can pull. The Sub-Committee feels that an experiment on this line may give a new breed for the Tarai that may have more milk and better draught quality and thus save the cows from being eliminated from this tract.

Indian Veterinary Research Institute, Izatnagar.—This institution is doing excellent work on cattle nutrition. The effort to utilise for cattle-feeding such grasses, leaves and shrubs as used to be wasted until now is really praiseworthy. The institution is also making an effort to evolve a heavy yielding strain of Harianas, but, it was unfortunate that even this institution has not got a clear picture of what their improved animal is going to look like and what are the particular points in which the present

Hariana is lacking. *The Sub-Committee feels that without having a very clear picture of what is required, it will not be an easy task to chalk out a line as to how the desired result can be achieved, or, even effect increase in milk yield without deteriorating the strain in some other essential points.*

Military Dairy Farm, Bareilly.—This farm greatly emphasises on buffaloes and their selection is based purely on the milk yield of the dam. A few cows that are kept here are mostly cross-bred having predominence of holstine blood. Effort is being made to back cross them to Indian breed.

Tarai Colonization Farm, Nagla.—There are buffaloes and Harianas on this farm. It is said that some times back the condition of the animals had deteriorated badly, but, at the time the Sub-Committee visited the farm the condition of Harianas was pretty good. Buffaloes, however, could be better. The milk yield of Harianas unfortunately was not very encouraging. Buffaloes on the other hand are doing well. The staff there complained of the menace of 'Dans' flies which attack lighter colour animals particularly whites much more than dark coloured animals. The department has recently decided to try Sahiwals in this track and some of the Co-operative Societies of displaced persons settled here are said to have already got Sahiwal bulls.

Mechanised State Farm, Hempur.—This farm has also got one of the famous breeds of the Tarai, i.e., Ponwars. Unfortunately like the Kherigarh, they are also falling in disfavour. The department wanted to sell nearly 200 heads of cows for which the only bidder was a butcher from Moradabad and who also was not prepared to give anything more than about Rs.20 per head. Buffaloes on the other hand are coming more and more in favour not only for milk but also for draught. A very large percentage of the carts on the roads have got buffaloes instead of the bullocks and it is said that people who used to utilise bullocks for agricultural purposes are also now resorting to the use of buffaloes.

It is feared that if something is not done quickly buffaloes will completely replace cows and bullocks in this area. The Sub-Committee feels that an experiment to cross the breed with some Indian or even foreign breed with a view to evolve a new type of animal for this tract will be a most appropriate thing.

Bara Pachpera Concentration Camp.—This camp has recently been started. A building has been completed with a view to make full use of the carcass and a shed and a yard have been erected to house the animals that are sent there. Only about 20 animals were there when the Sub-Committee visited the place. It is said that the animals when sent there, were so weak that they had to be carried on trucks and bullock carts, but, by the time the Sub-Committee visited the place the animals appeared to be, if anything, healthier than the animals found in villages. It was rather unfortunate that one or two bulls had also found their way there and a few buffaloes have also been accepted in the Concentration Camp.

The Sub-Committee was of the opinion that these animals would soon start breeding and multiplying and the conditions prevalent in the Concentration Camp will at the very least enhance the life span of so called decrepit animals by at least five years if not more and whatever arrangements for future are to be made must be made keeping this fact in view.

One more point was considered worth recording i.e. a large number of animals belonging to some owner of 'Gauri' pass through the Concentration Camp. If this sort of practice continues breeding in the Concentration Camp cannot be stopped.

Enquiries from the people of the neighbouring areas reveal that people were not at all anxious to send their animals to the Concentration Camps, the chief reason appears to be that the animals, no matter how non-productive they are, are no burden to their owners. The system generally followed is that the owners pay a very nominal sum to certain persons who are supposed to take the animals out for grazing in the morning and in the evening. If the animal is in milk, it gets a very small quantity of *chuni* just before milking and is let loose again for the night. Animals that are kept in this fashion generally develop the habit of finding food for themselves in somebody else's fields or gardens and become clever enough to avoid being caught. Therefore, the owners feel that whatever little they get for the hide of the animal is a clear profit to them.

Escorts Mechanised Farm, Tarai.—This is in the heart of the colonisation area. They had some excellent specimen of Sahiwal breed in excellent condition, but, unfortunately they also had a few Harianas mixed along with them. On inquiry it was revealed that they had the Hariana type of bull because they could not get a Sahiwal.

Mahatma Gandhi Gaushala, Tarai.—This Gaushala is also in the heart of the colonisation area surrounded by a cultivated area on all sides. The Gaushala has also got about 600 acres of land which they propose to bring under cultivation. Like every other Gaushala, this Gaushala also has cows of all breeds and description but most of the animals have Ponwar blood in them. They are absolutely at home in their home land of Tarai. They manage to run out of Gaushala area and feast merrily on the crops alround. If this Gaushala has to serve any useful purpose where it is located now, it will have to concentrate itself on developing a dairy farm and send all their non-productive and useless animals to the Concentration Camp. That place is not the correct place to keep animals that are unproductive and unfit to breed from.

Refugees Co-operative Farm.—This society of the refugees is said to be most flourishing society. They have got excellent Sahiwal cows and buffaloes of Neely breed. Their regret is that they cannot get good bulls either for their buffaloes or for their cows. It will really be a very regretable thing if for want of this little help their stock deteriorates. The Veterinary Department should give first priority to their needs.

Babugarh Mechanised Farm.—This farm has got Harianas and Murrah buffaloes. This farm has got an outstanding Hariana cow which has yielded in her peak period nearly 42 lbs. of milk. They have also got an excellent specimen of buffaloe in their herd. But, in order to achieve uniform standard of excellence the farm will have to work hard and keep a very vigilant eye on what they select for inclusion in their herd.

The Hariana bull calves that are kept at this farm awaiting distribution gave a clear picture of where we are lacking. They not only varied in shades of colour, but, in various points of conformation giving a true indication that we are not clear at all about the type of the animal we want. We were also informed that in this area although cows are fairly good producers compared to the cows of the eastern districts, they are not at all kept as milch animals. The culled cows that have male calf with them fetch much higher price whereas cows with female calves are not in demand at all. Cows in this area are essentially considered to be animals for production of bullocks. There is also a difference in price of cows' and buffaloes' milk; the latter sells at a higher price. Culled buffaloes fetch more than the book value in auction whereas cows not even 25 per cent of the book value.

Hapur Gaushala.—This Gaushala has a fairly good collection of cows. The cows in milk are kept in Hapur whereas the dry animals are kept somewhere in the Khadar where they have got a few hundred acres of land. The Secretary of Gaushala said that he did not find any difficulty in selling the cows milk in Hapur itself but the milk generally went to the business-men for home consumption and not to the *halwais* or to the market.

Military Farm, Meerut.—This farm has also got the famous Ferozpur Herd of Sahiwal, cross-bred cows as well as Murrah buffaloes. Buffaloes are kept separately from the cows. The cows, although pretty heavy yielders, differed considerably in conformation. The bulls also although pure-bred Sahiwals varied greatly revealing the same old story that the idea of type is not clear even on the Government Farm.

Co-operative Milk Collecting Depot, Meerut.—The depot is doing very useful work in finding a market for milk produced in Meerut. According to their figures 90 per cent of the milk collected comes from buffaloes and only 10 per cent from cows. The milk collected is almost entirely sent to Delhi.

Hastinapur Dairy Farm.—This farm is in the heart of new township of Hastinapur. The stock on this farm has been transferred from Nagla. It is said that the animals when they came here were very poor in condition. They had, however, recovered considerably, but, still they were not in a condition when their full capacity could be judged correctly. How-

ever, the fact that the uniformity of type was not there either in the buffaloes or in the cows clearly indicate that this fact requires to be emphasised as strongly as possible.

Aligarh Central Dairy Farm.—The Sub-Committee visited the Central Dairy Farm. The stock on this farm is cross-bred. Some of the cross-bred stock has also been culled and sold by auction which fetched good price proving the popularity of the animals. People were unanimously of the opinion that the cross-breds have been the best producers there. They did very well in Aligarh and fetched very high price in the market. Unfortunately, the cows as well as the bulls on the farm are of so uncertain breed due to the frequent change of policy that it is impossible to predict which cows will produce what by the bull that is there. This situation should be remedied without delay and pure-bred bull of Indian or foreign Dairy breed should immediately be sent there to replace the present bulls.

Etah—Raja Saheb Awagarh's Private Hariana Herd.—The Sub-Committee was fortunate in having an opportunity to see the excellent work done by Raja Saheb of Awagarh in improving Hariana breed from milch as well as from draught point of view. The uniformity of the herd, the conformation of individual animal and the excellent dairy under development in the herd was being all praise; no cow in the herd averaged below 3,500 lbs. It is regretted that this herd is likely to be lost to the State, as, due to financial difficulties after the abolition, Raja Saheb of Awagarh who has built this herd in the last 35 years or more, is not in a position to maintain it any longer.

The Sub-Committee is strongly of the opinion that the Government, in consultation with the department, should evolve some plans to save this herd from destruction without any loss of time.

Mathura Veterinary College Dairy Demonstration Farm.—It has got cattle of Hariana breed. The selection is fairly good and some animals are undoubtedly good producers. It is again regretted that even the Veterinary College is not quite clear as to what improvement they have to make in the animals they are breeding and what their improved animals are going to look like when their objective is achieved.

Madhurikund Mechanised State Farm.—This farm is situated by the side of the canal. Yet due to lack of adequate water facilities, quite a large portion of the farm still remains uncultivated. The effort made to select the animals, both of Hariana and Murrah breed, is really praiseworthy. The condition of the animals was no doubt good, but, unfortunately, as on other Government farms, even here the selection is being made on the basis of milk alone. There is no market for cows or heifers. They either remain unsold or have to be given practically for nothing. In contrast to this there is always a market for buffaloes which generally fetch higher price than the book value.

Agra Dayalbagh Dairy Farm.—This Dairy Farm was once upon a time aiming at very high ideals, but, unfortunately it has deteriorated to an extent from where it can only be recovered by a very determined effort. The cows are mostly crosses having varying percentage of both foreign and Indian blood of different dairy breeds. This institution could serve very usefully if they would only stick to one dairy breed and grade up their herd with first rate bulls of that very breed. The Sahiwal that they are using at present cannot be classed as first rate. Even if they want to stick to this breed they will have to get some outstanding animals and get rid of both of their bulls.

Balwant Rajput College Farm.—This farm has a small herd of excellent Harianas of Awagarh Strain. It is regretted that the bull supplied by the department is far inferior to the cows. The officers of the department concerned should make it a principle to see that the bulls supplied to the established herd are capable of grading up the stock and not down. The College authorities even went so far as to say that they protested when this bull was being supplied but to no avail.

Mechanised State Farm, Bharari (Jhansi).—There are Harianas, Tharparkars and Bhadawari buffaloes on this farm. Inspite of the care that is being taken it appears rather difficult that it will be possible to segragate Tharparkars and Harianas and prevent inter-breeding particularly when the staff has to deal with illiterate farm hands and the two breeds are so much alike. This farm has also got a few outstanding cows, but, the average of the herd is low. Tharparkars also seem to be quite different from the Tharparkar herd that is at Karnal and yet some of the Tharparkar cows on this farm have come from Karnal itself. Suprisingly enough, the Tharparkers are yielding less than the Harianas on this farm. The Sub-Committee is of the opinion that Tharparkars may be removed from Jhansi and be sent to some eastern district where upgrading of non-decript animals is likely to give better results. Gangateeris and Shahabadis, it is said, have sprang up from Tharparkar crosses that were being distributed from Patna and Bihar.

Bhadawari buffaloes.—Bhadawari is indigenous to the basin of Chambal and Jamuna. They are small animals comparatively light in colour and have very high percentage of fat in their milk. Butter fat as high as 13% has been recorded at the Bharari Farm itself. It is recommended that this breed of buffaloes instead of being graded up by Murrah be selected and bred exclusively for Butter fat contents. It is recommended that this breed of buffaloes instead of being graced up by Murrah, be selected and bred exclusively for better fat contents and it should also be ascertained whether the claim, that this breed, due to its lighter colour stands the heat better, is true. And, if so, to what an extent.

Pratapgarh and Allahabad—21st February and 22nd February, 1954.—The Chairman of the Sub-Committee along with the Chairman of the Gosamvardhan Enquiry Committee visited Bainti and Bhadri in

Pratapgarh district and Naini Agriculture Institute and Korhar Ghat in Karchana Tehsil of Allahabad district. The Chairman being directly connected with the work done at Bainti and Bhadri, refrains from making any comments on the work done and results achieved there. He leaves it to the Chairman of the Gosamvardhan Committee to express opinion.

Naini Agriculture Institute has been working on the cross-breeding work with Sindhis and Jerseys. It has demonstrated without doubt that a breed of Indian Cattle which is for all intents and purposes Indian both from the point of view of external appearance as well as from the point of view of heat and disease resisting qualities can be evolved which will have between 25 to 50% more milk yield than the indigenous breed from which it is developed.

At Korhar Ghat, Pandit Kashi Prasad Sirhir has very ably demonstrated what upgrading with a dairy breed can do to non-decript animal. He showed nearly 200 heads of animals that were up-grades from indigenous animals by Sindhi bulls. Quite a few of them looked exactly like Sindhi and some of the cows had as high milk yield as 30 to 32 lbs. per day. All those who assembled there were unanimous that these upgraded animals were more economical, had much higher milk yield and almost just as much fat percentage as a local buffalo. The Sindhi breed is very popular in that area. They want more and more bulls of that breed and there is a keen demand that a hospital should be established there as the place is cut off for six months during the rains and part of winter.

V. *General point put forward by the members and the various witnesses examined.*

(1) (*a*) The problem of cattle in the State is full of contradictions. For instance cultivator who is responsible for maintaining the vast cattle population is not taken into confidence by the agitators. The people who agitate generally do not share the burden of cattle population. The 'Cow' has become more of a political rather than economic issue. The agitators say what the Government should do but do not come forward to say what responsibility they or the public they represent will shoulder.

(*b*) People want to proect cow and keep buffalo for milk and butter.

(*c*) Cow is called the 'mother' yet milk is not associated with it. It is an accepted producer of beast of burden and manure.

(*d*) Demand for the draught animal is on the decrease due to the development of better communications, tube-wells, canals and motor transport. Yet, only draught quality in bullocks is emphasised and milk is ignored.

(2) The responsibility of keeping the bulls should now be that of the Panchayats and not of individuals. Unfortunately, Panchayats of all the districts are not taking the same interest as they should.

(3) Buffalo milk fetches higher price than cows milk. At places 'halwais' will not take cows milk at all. In the village of the western districts those who can afford generally keep buffaloes whereas cows are kept

mostly for bullock production, some giving the entire milk to the male calves. Only poorer people milk the cows and use the milk.

(4) There is a custom in certain parts of Meerut district to leave free the first heifer of every cow. Besides that most of the cows that become diseased or uneconomical are also set free. Therefore, the problem of stray and wild cattle is becoming a serious problem. Besides other places, Jhansi, Mathura and Hastinapur (Meerut) are badly affected places.

(5) Old bullocks are disposed of in the village markets to people known as 'Vyaparis' who go collecting such animals from 'Hat' to 'Hat' and taking herds of 500 to 2,000 from the western districts once or twice a week towards Moradabad and Rampur. People who sell them or see them on the road can have no doubt about the purpose they are taken. Their prices vary from Rs.10 to Rs.25 largely depending on the size rather than the condition of the animal.

(6) In certain areas dead cattle are thrown out of the 'abadi' and are not even flayed.

(7) Stray and wild bulls greatly interfere with the cattle development programme in the State by undoing the good work done by the approved stud bulls.

(8) Bullock carts are economical only upto a distance of ten miles or to the nearest Hat. Thereafter, trucks are becoming more and more popular and are on the increase even in the interior.

(9) People will prefer cows to buffaloes if only cows could produce richer milk or larger quantity to compensate the lower fat percentage. Such an animal will be preferred even if it produces slightly slower bullocks as that is not to affect materially the owners of small holdings upto 10 acres.

(10) In Tarai and sugarcane areas cows and bullocks will be completely replaced by buffaloes if cattle of above quality are not made available before long. In Shamli Tehsil of Muzaffarnagar district, 9 out of 10 bullock carts are rubber tyred and buffalo yoked.

RECOMMENDATIONS

Breeding

1. Auction of animals culled or surplus on the Government Farms in western districts should stop immediately. Further, if they are not in demand where the Farm is situated, they should be sent to the eastern districts and given on taqavi or/and concessional rates where they will give better results, even for upgrading work than the local non-decript animals.

2. Government State Farms should keep cows for milk yield and breeding draught animals but if buffaloes are to be kept at all, they should be kept only for their fat percentage.

(3) Only such animals should be allowed to be dedicated on religious grounds for use as a stud bull as are approved by some competent authority of the department of Animal Husbandry.

(4) It is essential that the breed standards and ideals for each breed of importance in Uttar Pradesh that is kept on Government Farms be fixed to guide the breeding policy on all the farms and other institutions. In order to avoid such standards being interpreted in accordance with the likes and dislikes of individuals they should be reduced to colour prints life size cement statues and smaller models that may be exhibited at prominent places and in the offices on the farm so that every worker may have a clear mental picture of the ideal to be achieved.

(5) Bulls kept on the Artificial Insemination Centre should essentially be of outstanding quality both in conformation and in pedigree. It is rather unfair to induce the villagers to go to the Artificial Insemination Centres for breeding their cattle when they see that the bull used is not any better or in some case inferior to what they have in the villages. It would be better to have only as many Artificial Insemination Centres as can be provided with outstanding bulls. Mere ability to donate semen easily should not be the criterion for a bull to be selected.

(6) (*a*) Private breeders should be encouraged to take up cattle breeding on scientific lines. With a view to give incentive to them to take up this work, a reasonable price for the pedigreed animal should be guaranteed by the Animal Husbandry Department.

(6) (*b*) Some plan should immediately be evolved whereby the valuable herd of Raja Saheb of Awagarh is saved from destruction.

(6) (*c*) In view of the constant and increased demand for better quality bulls, the Animal Husbandry Department should have adequate provision and facility to buy animals at a good price.

(7) It should be the personal responsibility both the District Livestock Officer as well as of the Deputy Director of Animal Husbandry-in-charge of circle to ensure that at all the State Cattle Breeding Farms and other well established herds as well as Artificial Insemination Centres in their respective districts and circles, bulls only of known pedigree and outstanding quality are used and their pedigree sheets properly maintained. Improvement of cattle is a gradual process and unless seed material is continually improved, the desired objective cannot be achieved.

(8) In selected pockets, State Farms or even at one or two private farms cross-breeding work with foreign breeds like jersey and Gurrensey for the planes and DEXTER for the hills be undertaken to achieve quick results for infusing the quality of high milk and butter yield in the cows as an experimental measure.

(9) State Herd Books should be established for all important breeds in which animals of the required standard are registered and carefully followed in respect to their breeding to high class bull and utilization of their progeny in the larger interest of the cattle development.

(10) Subsidy for the rearing of selected bull calves as well as other means of encouragement be provided to the tenants interested in cattle breeding so that the most vital though neglected industry may be raised to the desired level of efficiency for the economic prosperity and health of the nation—subsidy means encouragement.

(11) In order to harness all the available marginal land for livestock rearing it is strongly recommended that Grantee Farms may be established. The avenue of establishing co-operative grantee farms should also be explored.

Nutrition.

(1) Irrigation rates for fodder crop should be free or reduced considerably.

(2) Common pasture lands to be developed after consolidation of holdings should have controlled grazing and irrigation facility, otherwise, such pastures will not provide any cattle food and would be reduced to mere exercise grounds as the present day 'usars' are.

(3) Silage making should be encouraged. Co-operative Societies be formed for making silage and storing them to be used in summer when fodder is scanty.

Grasses' leaves and shrubs that are not used as cattle feed normally but are converted into suitable and economical cattle food by the processes developed in the I. V. R. I., Izatnagar be made popular and known to each district through the Veterinary Hospital and utilised for the silage making.

(4) Suitable legume and other grasses that could be grown under the shade of the trees in orchards be developed. For encouraging such a fodder production in orchards, such land should be exempted from Agricultural Income Tax Act. This will make available the vast areas under Desi mangoes, Mahuas and other groves for the purpose of growing cattle feeds.

(5) Areas that are being newly aforestated be it for the control of erosion, desert or any other purpose should be planted exclusively by such trees the leaves and pods of which can be used for feeding cattle.

(6) 'Ajna' grass should be planted uunder 'Babul' trees.

Stray cattle.

(1) The responsibility of keeping the cattle properly and not allowing them to damage somebody elses' crop should rest on the shoulders of owners more rigidly. The cattle should, therefore, be branded and registered by

the Village Panchayats as is being done by the department in Key Village blocks. The owner should either keep the animal or send it to the nearest collecting centres of the Concentration Camp or Gaushala at his cost.

(2) With a view to remove the burden of the uneconomic stock on fodder resources; large number of concentration Camps will have to be established, but the conception of the Concentration Camp will have to be greatly revised, if it is meant to reduce the pressure of surplus, old and diseased cattle. Instead of being Convalescence Camps as the present Concentration Camps are, they will have to be Concentration Camps in the real sense where the cattle may die a natural death without being starved. It is recommended that big areas such as one forest block be fenced and cattle in large number are put in it to live a natural life and die a natural death.

(3) All the cattle pounds of the districts should be used as Collection Centres for unwanted cattle. There should be no bar in admitting any type of animal and at fixed intervals all unclaimed cattle should be removed to the nearest Concentration Camps.

(4) There should be heavy penalty for the onwer who lets loose or allows his animals to go astray.

(5) The problem of wild cattle which has already reached a menacing stage should be tackled with all promptness. The present methods of catching the wild cattle is crude and slow. In view of the fact that foreign experts are coming for almost all purpose, it is recommended that the services of a few cow-boy be obtained to train our mounted police as well as others in roping cattle from horse back. Animals thus caught should be sterilised and sent to the Concentration Camps, if they cannot be marketed. Some staff may as well be deputed to foreign countries from this State to learn the art of catching the wild cattle.

(6) Research should be made, in all possible haste, to sterilise cattle, both males and females with the help of harmones, drugs or easy operation to prevent breeding of unwanted type of animals.

Disease control—

(1) The State of Uttar Pradesh has got 51 districts and 234 Veterinary Hospitals bringing an average of less than 5 hospitals per district when Punjab has got 193 Veterinary Hospitals in 13 districts i.e., 14.11/13 hospitals per district and the All-India average is 7 per district. It is recommended that a progressive State like Uttar Pradesh should at least be at par with the All-India average and try to keep pace with the neighbournig States. Veterinary Hospitals should be the centres of all Animal Husbandry activities.

The annual replacement after the full quota of compounders and stockmen is achieved will amply justify combining the compounders' course

with that of stockmen and the stockmen-*cum*-compounders course being made permanent. It will, therefore, be proper if this question is examined with this end in view.

(2) Refresher Course should be started for the Veterinary Assistant Surgeons as well as for stockmen specially those who have received only six months' training.

(3) Scanty attention has been paid to the ento-and endo-parasites of livestock in general and cattle in particular. It is suggested that the possibility of having cattle dipping tanks at the important cattle markets where cattle regularly assemble be explored so that the cattle thus treated may remain reasonably free from the parasites and the effect of the same be examined.

Miscellaneous—

(1) Taqavi loan rules should immediately be modified to enable even the cultivators to take advantage of the same and get desirable type of cattle.

(2) Government Cattle Farms should only concentrate on breeding such animals that are outstanding and far above the average type of animals found in the breeding tracts of the respective breeds. The Cattle bred at the Government Farms have not yet attained the standard they should. Photographic records of each generation of the animals in the herd be kept on the Government farms to enable the officers to check on the progress. This cannot be done merely by the pedigree.

(3) Better transport facilities through refrigerated vans be provided in the breeding tracts to transport milk to the urban areas. Unless it is made possible to produce milk economically in the urban areas, the practice will continue to bring the best cattle from the breeding tracts to the urban areas where their life is reduced by all possible means to one lactation only. This should be experimented through co-operatives in KABAL towns first.

(4) (*a*) Milk powder plant should be put up at suitable places to preserve the whole and skimmed milk when milk is surplus. This will ensure cheap milk supply to the urban areas in the lean periods.

(4) (*b*) Excise duty should be levied on foreign imported milk powder.

(5) All outstanding animals in each village be registered and their export outside the State without permit banned. So long as best cows continue to go to Calcutta no amount of efforts in breeding better animals can achieve any effective results as the best of our cattle go there and perish. This recommendation be confined to cows.

(6) It is recommended that Higher Post Graduate Course for research work and specialist officers should be introduced at the U. P. College of Veterinary Science and Animal Husbandry at an early date in order to meet the increased demand of the State for such highly trained personnel required for the implementation of the various development and research schemes.

Conclusions.

It cannot be emphasised too strongly that the problem of cattle in our country is next only to Defence and will have to be faced with the same determination as necessary for the latter. Cattle which is the wealth of a nation, if neglected, would prove our undoing.

Buffaloes will without doubt eliminate cows and bullocks in course of time if we do not develop the latter to fit in the changed circumstances. If emphasis is continued to be laid on the draught only in the case of our cattle, a time will come when they will become wholly uneconomical. If we do not safeguard against this danger from right now, we will be several cattle generations too late when it is realised.

Lastly the Sub-Committee expresses its grateful thanks to the officials of the Animal Husbandry Department, Co-operative Milk Supply Unions, private individuals etc., who extended their helpful hands to the Sub-Committee in making its deliberations successful.

Sd.

Bajrang Bahadur Singh.

Gopal Shastri.

Lila Dhar Asthana.

Suresh Praksh Singh.

Ram Naresh Shukla.

Raja Ram Shastri.

M. J. Mukerjee.

Swami Bhaswaranandaji.

APPENDIX V

Report of the Cattle Economics Sub-Committee

The Cattle Economics Sub-Committee was formed in accordance with a resolution of the Gosamvardhan Enquiry Committee which was passed on 29th and 30th July, 1953 under the Chairmanship of Dr. Sita Ram former High Commissioner for India in Pakistan. Its constitution was as follows

1. Sri Din Dayal Shastri, M.L.A., *Chairman.*
2. Sri Rai Bajrang Bahadur Singh, M. L. C., *Member.*
3. Sri Vishnu Sharan Dublish, M.L.A.,
4. Sri Babu Lal Mittal, M.L.A.,
5. Sri Suresh Prakash Singh, M.L.A.,
6. Sri Raja Ram Shastri, M.L.C.,
7. Sri Virendra Verma, M.L.A.,
8. Sri Karan Bhai,
9. Sri H. C. Joshi, Deputy Director Animal Husbandry (H. Q.), *Secretary.*

The subjects assigned to the Committee were as follows :—

(*a*) Cattle slaughter.

(*b*) Unlicenced Slaughter houses.

(*c*) Gosadans

(*d*) Gaushalas.

(*e*) Stray, wild, old, diseased and un-economic cattle.

(*f*) Cattle markets

(*g*) The Hide Flaying Centre at Bakshi-ka-talab, Lucknow.

The necessary data with regard to the subjects mentioned above was supplied to the members by the Secretary and the first meeting of the Sub-Committee was held on 12th August, 1953 in which general discussions took place on various items entrusted to it. After preliminary discussions it was decided to issue a comprehensive questionnaire embodying the various points entrusted to the Sub-Committee which was approved by the Sub-Committee in its subsequent meeting held on 25th to 28th August, 1953. It was issued to :-

(1) Heads of all the Political Parties.

(2) Various religious sections.

(3) All Local Bodies. (Municipal Boards, District Boards, Town and Notified Area Committees.)

(4) All Gaushalas.

(5) All M.Ps. M.L.Cs. and M.L.As.

(6) All Commissioners and District Magistrates.

(7) All Heads of Departments.

(8) Vice-Chancellors of all Universities in U. P.

(9) Important institutions and individuals.

In order to get a first hand knowledge of the working of Gosadans and Goshalas, the Committee made a tour of Bareilly, Moradabad, Rampur and Meerut districts. During the course of their tour, the Committee assessed the extent of unauthorised slaughter of cattle, inspected private and Government Gosadans, Gaushalas and some cattle markets.

The third meeting of the Committee was held on November 18 and 19, 1953 in which the replies, received from the persons to whom the questionnaire was issued, were considered. In view of the fact that the replies were received from very few people, the Committee decided to make a tour of the State and take evidence of the people on the spot.

The Committee visited Gorakhpur, Deoria, Banaras, Allahabad, Agra, Meerut and Kanpur and recorded the evidence of about 250 persons which included people of all religions and of different walks of life.

After taking stock of the entire position vis-a-vis the evidence on record the Sub-Committee discussed the various points in its 4th meeting from 4th to 6th January, 1954 and took tentative decisions on various items. The views of the Sub-Committee with regard to the various items entrusted to it are given below :—

Cattle slaughter :—The Sub-Committee examined the trend of variation of the slaughter of cattle during the past 16 years, i.e., since 1936-37, and the various measures taken from time to time to regularise the slaughter of cattle. The assessment of the problem in all perspective was limited only to the records of slaughter of cattle in recognised slaughter houses and as is evident, the number of cattle so slaughtered after the year 1946-47 has been very small. The figures of slaughter of cattle from 1936-37 to 1952-53 have been collected from the annual reports of the Animal Husbandry Department which had collected the statistics from the various Municipal Boards, District Boards, Notified Area and Cantonment authorities. From an examination of the figures so available it will appear that the figures of slaughter of cattle in the recognised slaughter houses have been varying alternatively from 1936-37, to 1939-40. The maximum figures of 1,42,237 heads of cattle slaughtered was reached in 1937-38. But from 1940-41 a definite downward trend is noticeable, so much so that there has been a

steep decline from 1942-43 to 1943-44, and a still steeper decline from 1947-48 onwards. The steep decline from 1943-44 to 1946-47, however, seems to be due to high cost and also on account of certain restrictions imposed by the State Government on the slaughter of certain types of cattle such as milch and pregnent cow, cattle with calf *at hee,* cattle below ten years of age and any other cattle fit for breeding. The further drop in the figures of slaughter of cattle from 1947-48 onwards, however, represents the trend of public opinion against the slaughter of cattle in the post-independence period of which everybody is aware, so much so that the number of cattle slaughtered in 1951-52 and 1952-53 dwindled to 2704 and 2733 respectively. On the other hand, the seemingly sharp decline registered during this period might also be due to unauthorised slaughter which could not be accounted for.

The Sub-Committee felt that there was a great problem of unauthorised slaughtering in some parts of the State. With this view, it tried to find out truth by making surprise visits and the members were shocked to see that a great amount of unauthorised slaughter was being carried on in private houses in Rampur and Moradabad districts.

Enquiries made in this connexion have revealed that public opinion against the slaughter of cattle has grown so overwhelming that most of the Municipal Boards, District Boards, Notified and Town Area Committees have themselves, more or less, banned the slaughter of cow and her progeny.

The figures of slaughter of cattle at the various recognised slaughter houses in 1952-53 reveal that though calves have not been slaughtered anywhere, cow slaughter has been practised at only one slaughter house, viz. Hasanpur in Moradabad district and bullocks have been slaughtered in five slaughter houses, viz. Aligarh (Municipal Board, Bisalpur) Municipal Board, Fatehpur (District), Hasanpur (Municipal Board) Moradabad, Mathura (Municipal Board) and Debai (Municipal Board) Bulandshahr. Thus the Sub-Committee is of the opinion that as far as slaughter of cow and its progeny in authorised slaughter houses is concerned, there is no serious problem confronting its total ban.

Out of about 250 witnesses examined by the Sub-Committee the majority were in favour of the imposition of a total ban on the slaughter of cow. Similarly out of about 200 replies received to the questionnaire issued by the Sub-Committee, the concensus of opinion was in favour of imposition of a ban on the slaughter of cattle. A minority has, however, expressed itself in favour of the continuance of slaughter of cattle on the plea that the livestock population is abnormally large, i.e., much in excess of the fodder and grazing resources of the State, and therefore, the old, useless and uneconomic cattle should be allowed to pass to the slaughter houses so that there is a check in the growth of the unwanted livestock.

The Sub-Committee has remained wholly unimpressed with this argument as will be seen later. The Sub-Committee is of the opinion that the problem of the uneconomic cattle, saved from the butcher's knife, can be solved through Gosadans without much difficulty or strain on the finances of the State. Besides, as the matters really stand today, the problem of uneconomic cattle is even now before us in all its seriousness. Therefore, it would be anamolous to conclude that total ban of cow slaughter would raise any fresh problems. The Sub-Committee also feels that most of the people who have expressed themselves against banning the slaughter of cattle are ignoring the fact that most of the Local Bodies have already banned the slaughter of cattle and that actually no fresh problem is likely to arise if cow slaughter is totally banned through uniform legislation.

Reduction in the slaughter of cattle is said to have already affected the trade as the number of slaughtered hides, which are valued most, has decreased correspondingly. A scrutiny of the records of slaughter houses, however, reveals that decrease in the number of cattle slaughtered has resulted in a corresponding increase in the number of buffaloes slaughtered in the recognised slaughter houses. The number of buffaloes slaughtered in 1936-37 was 1,12,030 whereas in 1952-53 it increased to 2,55,812. Besides the old, useless and unproductive cattle, which are prevented from being slaughtered, will be diverted to Gosadans where provision has been made for the establishment of an uptodate Charmalaya, and where the hides of dead animals will be flayed by well trained expert staff thereby not allowing the quality of hides to deteriorate and the hides obtained there will be as good as those obtained in slaughter-houses. The deficiency will be proportionately made up and the trade is not likely to be affected on this account. The Sub-Committee is, therefore, of the opinion that in view of the overwhelming demand of the public representing all communities, an Act should be passed by the legislature totally banning the slaughter of cow and its progeny including bulls, bullocks and calves as early as possible.

A reference to the conditions prevailing in the existing slaughter houses will not be beyond the scope of this Sub-Committee. The Sub-Committee was shocked to see the condition of a few slaughter houses. Apart from insanitary surroundings, no covered sheds for the slaughter of animals were provided. It is essential to improve conditions in the slaughter houses both from the point of view of creating better hygienic conditions in order to avoid any possible contamination of the meat and infection through it. The fundamental of this object is the removal of slaughter houses from thickly populated areas as they are at present in some towns to the outskirts of the cities and towns at a reasonable distance. The bye-laws may be strictly enforced. Arrangements should also be provided in each slaughter house for proper utilisation of blood of the slaughtered animals for the preparation of blood meal. No special

mention need be made of the utilisation of hooves, horns etc. as they are already being utilised.

Above all, humane treatment to the animals to be slaughtered is most essential. Instructions in this respect have already been issued by the Government in the Municipal (A) Department with G. O. No. 426/XI–468-1936, dated July 31, 1942 and repeated in G. O. No. 135/XI–A-1285-52, dated January 17, 1953 and G. O. No. 874-A/XI–III-48 , dated July 31, 1953 but there is no visible evidence of their complete implementation so far. The Sub-Committee views this with great concern and suggests that the local bodies should review seriously the conditions prevailing in the existing slaughter houses and ensure that methods for slaughter with minimum pain are immediately introduced and arrangements are made to provide better type of instruments, adequate shelter and facilities for the supply of clean drinking water to the animals awaiting slaughter.

Unlicenced slaughter houses:—The report for 1952-53 indicates that there are only about 45 unlicenced slaughter houses in the State at present which are spread over as follows :

1.	Mirzapur	1
2.	Banaras	10
3.	Faizabad	2
4.	Saharanpur	2
5.	Bareilly	5
6.	Bahraich	20
7.	Jhansi	2
8.	Aligarh	2
9.	Bijnor	1
		45

Most of these are located in the residential houses of butchers or in the rural areas where effective control is ordinarily not possible. But as meat constitutes an important article of food through which diseases are easily communicable to human beings, it is necessary to ensure that only disease free animals are slaughtered under perfect hygienic conditions. For this purpose suitable and well protected premises for slaughter as well, as arrangements for ante and post-mortem inspection of cattle are

absolutely necessary. As there would be much difficulty in exercising effective control over such unlicensed slaughter houses which are located mostly in the residences of butchers in urban areas, the Sub-Committee is of the opinion that all such unlicensed slaughter houses be closed down and proper slaughter houses and meat markets be established in urban areas which will comply with the prescribed conditions. This will facilitate proper ante and post mortem inspection and maintenance of essential hygienic conditions for which bye-laws may be suitably amended, if necessary. There may be some difficulty in the control of such slaughter houses in rural areas, although some District Boards have given contracts for the collection of bones etc. in order to increase their revenue. They have permitted the establishment of slaughter houses in the rural areas but there is absolutely no control over them. With the establishment of a net work of Gram Panchayats all over the State, the difficulty in effecting proper control should not be insurmountable. The Gram Panchayats may be empowered to license such slaughter houses which fulfil the prescribed hygienic conditions. Arrangements should also be made for ante and post-mortem inspections. The Gram Panchayats should grant licences to such slaughter houses which fulfil the conditions to be prescribed by the proper authorities. If a qualified Veterinarian is not available nearby for ante and post mortem inspection, arrangements should be made to get the nearest stockman trained in meat inspection and he should be made responsible for the work.

(*c*) *Gosadans*:—The distribution of cattle and baffaloes according to age, sex and work groups for the State as a whole (1951 census) is shown in the following table :—

Description	Cattle		Buffaloes	
	Number	Percentage	Number	Percentage
Males				
(1) Breeding bulls i.e. entire males over 3 years kept or used for breeding purposes	10,883	0·05	15,170	0·16
(2) Working bullocks i.e. un-castrated males over three years kept for work only	11,454,742	48·72	1,010,330	10·9
(3) Bulls and bullocks over 3 years not in use for breeding work ..	162,746	0·71	16,306	0·18
(4) Young Stock under 1 year ..	1,453,358	6·18	648,323	7·01
(5) Young stock 1 to 3 years of age ..	1,562,986	6·64	362,798	3·93
Total ..	14,644,715	62·3	2,052,927	22·18

Description	Cattle		Buffaloes	
	Number	Percentage	Number	Percentage
Females				
6. Breeding cows i.e. cows over 3 years kept for breeding or milk production	6,096,050	25·92	4,960,136	53·62
7. Cows over 3 years in use for work ..	3,469	0·01	15,535	0·17
8. Cows over 3 years not in use for work or breeding purposes	20,530	0·08	12,228	0·13
9. Young stock under 1 year ..	1,4,00,765	5·96	1,147,829	12·42
10. Young stock 1 to 3 years of age ..	1,847,312	37· 7	7,197,561	77·82
Grand Total ..	23,512,839	100·0	9,250,488	100·00

In the report of Cattle preservation and Development Committee published by the Government of India, Ministry of Agriculture, the number of old, unproductive and decrepit cattle has been reckoned at 10 percent of the total cattle population. Even according to a conservative estimate, the number would not be less than 5 per cent. of the total cattle population in the State. Basing the calculations on these two estimated percentages, the number of such cattle in the State would be as under :—

1. No. of old, decreipt and unproductive cattle on the basis of 10 percent. population excluding buffaloes. **23,51,284.**

2. No. of old, decrepit and unproductive cattle on the basis of 5 percent. of the total cattle population excluding buffaloes. **11,75,642.**

The U. P. Census return of 1951 indicates that the number of cattle not used for breeding or work is 1,83,276 as against 1,33,914 in 1945. This works out to be 0.7 percent. of the total cattle population in 1951 and 0.6 percent. in 1945. Since the general belief exists in our country that the cow is never un-economic, it is considered that the enumeration regarding the number of useless cattle as 1,83,276 is to a great deal on the low side. On account of continuous breeding their number is always on the increase. Majority of our people, cow worshipers as they are, do not like to part with their old and uneconomic cows even today. Calculating, however, on the basis of the aforesaid number, i.e. 1,83,276 cattle, about 91 average sized Gosadans each having a capacity for 2,000 cattle are required. The area of land required for this number of Gosadans is 1,83,276 acres at the minimum allowing only one acre per animal, though the ideal would be to allow 2 acres to an animal. Looking at this problem

from the financial point of view, a sum of Rs.70,000 (Rs.20,000 recurring and 50,000 non-recurring) is required for the establishment of an average sized Gosadan having accommodation for 2,000 cattle, according to a type scheme prepared by the Government of India. At this rate, a sum of Rs.63,70,000 (Rs.18,20,000 recurring and about 45,50,000 non-recurring) will be required for the establishment of 91 Gosadans. Though the Government of India has agreed to finance 50 percent. of the cost of Gosadans but it is unreasonable to expect that they would be prepared to share the cost of 91 Gosadans in Uttar Pradesh alone, as their total target of Gosadans is 160.

Suggestions were invited from the public and some have suggested that the Gram Panchayats should be charged with the responsibility of maintaining all the old, useless and uneconomic cattle of the village or group of villages attached to it, but this does not seem to be practicable as there is already a shortage of pasture in the rural areas and it is continuously dwindling on account of the increasing pressure on land to support the growing human population. At present only 1.2 lakh acres of land is under pasture in this State, and if this or even half of it is set apart for the useless and uneconomic cattle, very little pasture will be left for the good and productive cattle which should receive our best attention for maintaining our economic structure and to prevent them from deteriorating into useless and uneconomic cattle. Besides, from the point of view of breeding on scientific lines and control of parasitic and infectious diseases, it is essential to segregate the useless and uneconomic stock from the good productive cattle.

Though people are sentimentally opposed to the slaughter of cattle yet quite a large number are, due to economic reasons, not prepared to maintain and feed the uneconomic cattle as is clear from the fact that they let them loose due to which the problem of stray cattle also has become alarming in recent years. Even if the people were prepared to maintain them, it is not desirable from the economic point of view as stated above. The fodder and grazing resources of U. P. being limited, the maintenance of uneconomic, old and useless cattle would adversely affect the health of improved, productive and useful cattle which would also eventually turn uneconomic. As such it is highly imperative to segregate the old, useless and uneconomic cattle from the healthy, useful and productive ones. The only feasible solution seems to be to establish as many Gosadans as possible in remote forest areas where plenty of grazing is available and which normally cannot be utilised on account of difficulties of transport. As the number of old, diseased and useless cattle is very large and Gosadans cannot be established to accommodate all such cattle, the Sub-Committee recommends as a via-media that, to begin with, at least one Gosadan should be established in each of the ten revenue divisions in the State besides the Gosadans already established or which may be established by the Gaushalas. Two Gosadans have already been established in

State. Eight more such Gosadans should be established immediately. The Forest Department should be made to co-operate in solving this problem by offering suitable extensive forest areas for this purpose as this is only a modest demand.

It is essential that the cattle in Gosadans are completely segregated from the cattle outside. There should be adequate arrangements for the supply of drinking water to the cattle and simple arrangements for shelter against rough weather. There need be no elaborate staff. Male cattle should not be admitted to the Gosadans but if they are admitted they should first be castrated. The male progeny, if any, should also be castrated at the earliest possible age, so that there is absolutely no breeding in the Gosadans. No buffaloes should be admitted to the Gosadans. These Gosadans should first be stocked with the cattle from the Key Village Area, Community Project, and Co-operative Milk Zones where intensive animal husbandry activities have been launched so that quicker results may be obtained from these efforts which will ultimately benefit the State. Proper arrangements should, however, be made for flaying the dead animals and for full utilisation of the carcasses in order to make these Sadans self-supporting.

The following are the very conservative estimated receipts from the caracass of a dead animal :—

	Rs.
Hide	11
Bones	2
Fat	4
Meat Meal	1
Hair, horns and hoofs	2
Total ..	20

While the Gosadans will be managed by public servants a Committee consisting of non-officials as well as officials of the Zone in which the Gosadan is located should be appointed for proper control and management so that there may be closest contact between the officials and non-officials and fullest public support is available.

The Gaushalas which are spread all over the State will play an important role in this matter. Such Gaushalas as have adequate and suitable land should establish Gosadans and Government should help them by offiering suitable non-recurring grants for the construction of sheds, and Charmalya buildings for utilisation of carcasses. Other Gaushalas should function as collecting centres for old, infirm, and useless cattle and to transfer them to the nearest Gosadan when a sufficient number of such cattle has been collected. The Central Governmnt should also be approached to charge only a nominal freight for the transport of cattle to Gosadans by rail and to sanction high priority in the allotment of cattle wagons for this purpose.

Since the problem is so gigantic and requires a huge amount of expenditure, the present finances of the State alone might not be available to meet all the requirements. In that case, in view of the overwhelming respect for the cow in this country the Committee expects that the public will not grudge a little extra burden in the form of a Goraksha cess if at all necessary. But it should be clearly understood that the income from such cess should be utilised for Goraksha purposes alone.

The main object of the establishment of Gosadans is to conserve the available feeds and fodders for utilisation by the good, economic and productive stock. The control of pastures in rural areas is, therefore, very essential. The Sub-Committee accordingly suggests that certain percentage of the total available area in each village should be set apart for grazing purposes and it should be prohibited from being put under cultivation. The number and quality of animal, allowed for grazing, should also be controlled. Something of this nature has already been included in the Consolidation of Holdings Act, and the Sub-Committee recommends that this should be given effect to immediately all over the State and be rigidly enforced. The pasture lands should be vested in the Gram Panchayats who should be charged with the responsibility of maintaining them properly. These should be strongly fenced, and better varieties of grasses grown in them. Only rotational grazing should be practised. The Gram Panchayats may be authorised to register the village cattle and to charge a nominal fee for their grazing. From this revenue the pastures may be maintained as recommended above. If these recommendations are implemented they will go a long way in improving the cattle wealth of the State and thereby our rural economy will result in improving the standard of living of millions of people.

(*d*) *Goshalas and their objects* :—From time immemorial cow has been held in great esteem in India for various reasons. The advent of the British and economic deterioration of the people gave birth to Goshalas that were then established in order to protect the cow from going to slaughter houses. About 60 percent. of the catle maintained in these institutions are old, unproductive and decrepit. As most of their income is derived from business transactions and also because slaughter houses were established there, Gaushalas were located mainly in cities inspite of the fact they are not proper places for keeping cattle. There are very few Goshalas which have sufficient land for cultivation or grazing purposes attached to them and majority of them are thus obliged to purchase fodder for their cattle. The cess which is collected in the name of these institutions is not diverted to them in full as a good part of it is withheld by the business men who collect it. The decrease in their income coupled with an increase in the cost of maintenance of cattle has added to the present deplorable conditions of these institutions. Most of them have stopped further admission of old and decrepit cattle because they are unable to maintain them. Many of

them have been closed down for want of enthusiasm and lack of funds. The few that are still in existance are working under very strained conditions.

Gaushalas Cess and Dharmada.—It should be clearly understood that Gaushala Cess and Dharmada are two different kinds of cess levied in the markets. At places where Gaushalas are in existence, Gaushala Cess is deducted and paid to the Gaushalas although the actual amounts depend mostly upon the sweet will of the persons collecting the cess. Dharmada is a cess which is deducted in almost all the organized markets. The collections are accounted for but spent by the business men who collect them in any "charity" that might attract their fancy. Though at present there is an unrestricted freedom for its disposal, there is a general demand to check its misuse.

Majority of the Gaushalas in the State are maintained through income derived from the Gaushalas Cess or Dharmada but there are quite a few of them which also depend entirely on other donations and charities or are attached to some educational institutions. Some of them are being run under a trust in or outside the State. Besides these Gaushalas there are a number of such institutions which are entirely run by sadhus who collect charity here and there. But quite a large number of persons collect charity on trains and roads in the name of Gaushalas which exist merely in their papers.

The Sub-Committee feels that Gaushalas have undoubtedly got great inherent potentialities and with a little help, guidance, care and check they can be of considerable help in augmenting the milk supply of towns to a great extent. Besides maintaining the old and decrepit cattle they can be turned into model gaushalas in the real sense of the word. A general conciousness has been created amongst the management of these institutions. The Committee, therefore, recommends that there should be a State Board of Gaushalas Development which should control the activities of these institutions and guide them on proper lines.

All the Gaushalas in the State should be licensed on nominal fees. The unlicensed Gaushalas should not be allowed to exist.

There should be a Legislation by which the deduction of Gaushala Cess, by whatever name, which are being made at different 'mandis' in the State should be made compulsory and it should be incumbent on persons making these deductions to make over the total amount of collection made upto a certain date, say Gopasthmi, to the Gaushala to which he is paying at present or to any other Gaushala according to the rules framed under the aforesaid legislation.

Gosadans will of course have to be started. But Gaushalas might also be encouraged to organise these Gosadans and run them effectively, under the active help and guidance of the Animal Husbandry Department. A

non-recurring grant for the establishment of such Gosadans should be made @ Rs.25,000 per Gosadan and land should also be given in some adjoining forest area. Where no Gaushalas will be forthcoming to shoulder the responsibility, the Government should open its own Gosadans as recommended previously.

The services of trained and qualified persons should be utilized in the Gaushalas.

Those Gaushalas which have no land may be provided, as far as possible, with suitable culturable waste lands which could be developed by them.

The Gaushalas should be encouraged and helped by the Government through proper recurring and non-recurring grants.

(e) Stray and wild cattle.—The system of keeping cattle stray and wild cattle has been existing in the country not only for some decades but from times immemorial. In the olden days of prehistorical era, there was no system of gathering the cattle or stall feeding them. People used to keep large herds of cattle which used to roam about in the jungles. There were no sheds form them nor was there any regular system for milking them. The extent of man's prosperity was measured by the enormity of the herd possessed by him. That system is continuing in certain parts of the country even now. But it suited the economy of the country in the good old days when the number of cattle was less and pastures were extensive. Now all possible means are employed to bring as much land under cultivation as possible for growing food crops to meet the increasing demand. Pastures are almost extinct and the number of cattle has increased enormously. Therefore, the system of straying cattle does not suit the present economic set up.

The maintenance of cattle in large numbers has become difficult due to the modern economic conditions and pressure on land. Therefore, a large number of old, useless and uneconomic cattle is set loose which roam about as stray cattle destroying crops.

The Sub-Committee made enquiries from all the districts of the State regarding the exact magnitude of the problem. The replies received indicate that it has indeed become baffling problem.

This problem of stray and wild cattle is of two distinct types, *viz.*, (1) Urban areas, and (2) Rural areas.

(1) *Urban Areas.*—In urban areas, citizens generally keep cattle for milch purposes, especially the 'gwalas' or 'ghosis'. But on account of the high cost of feeding, they let loose the cattle, with the result that such cattle destroy the lawns and gardens of cities and damage the crops of the surrounding area.

To remedy this evil, the Sub-Committee is of the opinion that from the public health point of view, maintenance of cattle in urban areas should be discouraged and arrangements should be made for the colonisation of the

'Ghosis' and 'Gwalas' in the out-skirts of the city at a reasonable distance. Collective milking under hygienic conditions should be encouraged in these colonies and milk transported to cities in the early morning and in the evening. ' Ghosis ' should be encouraged to settle in villages situated in the closer proximity of towns from where they could either transport milk themselves or through Co-operative Societies. The Municipal Boards should register and license the cattle maintained in their jurisdiction. Those who let their cattle loose should be penalised.

(2) *Rural Areas.*—The number of stray and wild cattle has recently increased enormously in the rural areas also. In order to protect the crops, measures should be taken for catching and proper disposal of stray and wild cattle. The Animal Husbandry Department should set up an organisation and have parties of experts for the catching of these animals. Animals that are caught may be tamed and made docile. The male cattle, capable of being used as draught bullocks, should be castrated and sold to the public. The female cattle which may produce milk to any economic level may also be similarly sold. Other cattle should be sent to the Gosadans. The staff of Animal Husbandry Department should also train the village people in the art of catching such animals and their domestication so that the village panchayats may be able to undertake the work themselves with the help and co-operation of the village people and the Animal Husbandry Department. The animals to be sent by the village Panchayats to the Gosadans may either be sent direct or through the nearest Gaushala which may undertake to transfer them to the Gosadans when sufficient number of them have been collected.

(f) Cattle Markets.—A sound marketing organisation is an essential prerequisite of any development programme. In the case of animal husbandry development work, the existence of a net work of cattle markets is an essential feature particularly as lakhs of cattle change hands every year for purposes of draught, milk and slaughter. Generally cattle are marketed by the breeders themselves, but not a small number of animals are sold through professional dealers as well. There are three kinds of marketing centres *viz.*, fairs, hats and daily markets. Cattle fairs are held annually, half yearly and, in a few cases, quarterly and monthly. They are held separately or in conjunction with religious festivals. The duration of a fair varies from a day to about a month or even more but those lasting for about a week are rather common. Cattle 'hats' or 'bazars' are weekly or bi-weekly markets generally held for a day. Daily markets are generally found in cities where milch and draught cattle are sold in '*ahatas*' and slaughter cattle are sold in 'mandis'.

Cattle markets and fairs were owned by the local bodies and private agencies, but after the abolition of Zamindari in the State and the responsibility for their supervision, management and control has been vested

in the Gaon Panchayats. These markets and fairs which were previously held by individuals in their own fields and groves are still continued to be held by them.

Various kinds of charges are recovered from the cattle dealers *viz.*, admission fee, sale registration charges, brokerage, ground charge and octroi, etc. Very decent income is derived from the cattle markets and fairs but *only a very small proportion* of it is spent in providing necessary amenities to the cattle, their owners and buyers.

Since the cattle markets, 'hats' and fairs, etc. serve both as assembling and distribution centres, necessary minimum facilities should be provided in them. At present even compound walls and fences are not found except in a few daily markets, and separate enclosures for different classes of cattle are also generally not provided. At fairs, there is usually no housing accommodation for cattle or their owners. Shady trees where available, provide shelter against sun and rain. Even the number of such trees in most of the fairs is inadequate. Similar conditions prevail at 'hats'. In daily markets housing accommodation is provided in some cities only but it is insufficient to meet the dealers' requirements. Arrangements for water supply in most fairs are unsatisfactory. Cattle are generally watered from common trough, pond or pool, which often becomes a source of infection for spreading contagious diseases amongst cattle. Arrangements for the supply of drinking water in 'hats' and daily markets are also poor.

Veterinary aid is provided by the Animal Husbandry Department at most fairs and foot-baths have been constructed at some places, but arrangements are not adequate, and need to be augmented.

The Sub-Committee, therefore, suggests that steps should be taken for proper management and control of Cattle fairs and markets.

(*g*) Hide Flaying and Carcass Utilisation Centre, Bakshi-ka-talab (Lucknow):—

Quite a large number of cattle and buffaloes die a natural death. If various products obtained from these animals are fully recovered and properly utilised it will not only be a tremendous help in the economy of the State and economic uplift of Harijans but also go a long way in restoring the economic balance consequent upon complete ban of cow slaughter.

The Sub-Committee paid a visit to Bakshi-ka-talab Hide Flaying and Carcass Utilisation Centre which has been organised under the guidance of a F. A. O. Expert. The Committee interrogated the trainees and it was learnt that most of them have joined the training with the object of

securing some jobs. The Centre should be so organised as to train those people who would in turn train own brethern in their own villages. The practice in vogue now is that the village chamars flay the hide a very primitive way and leave the carcass in the open to be eaten away by dogs and vultures. The other bye-products of the carcass are not utilised at all except a few bones which are collected from here and there.

The object of the training centre should be to teach the utilisation of all the bye product for the best advantage of the country. Efforts should also be made at this centre to find out ways and means to make the fallen hides as fine as the slaughtered hides.

Improved type of tools may be popularised in the countryside and it will go a long way if these tools are distributed free or on a subsidied basis.

The flaying parties of the Animal Husbandry Department should work in rural areas and teach the improved technique to the people who are actually engaged in the trade. Each village or a group of villages should have a Charmalya at a distance from the villages where recovery operations, as soon as possible after death, should be done.

Carcass utilisation may be made a part of Gosadans scheme and each Gosadan should have a Charmalya where utilisation of the carcasses may be taken up to make the Gosadan Scheme self supporting as far as possible. The bye-products, e.g., hide, meat, bones, fat, horns and hoofs, tails and gut should be fully utilised.

Summary of recommendations.

Although most of the Municipal Boards, District Boards, Town and Notified Area Committees have already put a ban on Cow slaughter in their jurisdictions yet in order to stop un-authorised slaughtering of cattle and also in view of the overwhelming demand of the public representing all Communities legislation banning the slaughter of cows and its progeny including bulls, bullocks calves and calves should be promulgated on a uniform basis in the State.

2. Unauthorised slaughter of cattle and other animals should be stopped and any body found guilty should be heavily punished.

3. (*a*) The existing slaughter houses should be removed from the habitable portion of the cities and towns to the outskirts at a reasonable distance.

(*b*) The building of slaughter houses should be improved in order to provide pucca flooring and fly proof doors and there should be arrangements for adequate water supply and shelter for animals awaiting slaughter.

4. (*a*) 8 more Gosadans should be started in the State immediately in order that there may be a Gosadan in each revenue division for the old, uneconomic and decrepit cattle.

(*b*) Buffaloes may not be allowed admission in Gosadans.

5. An advisory Committee of officials and non-officials should be formed for each Gosadan.

6. (*a*) The Gaushala Improvement Act should be promulgated in the State.

(*b*) All the Gaushalas in the State should be licenced under the Act.

7. A Gaushala Development Board should be formed at the State level who should advise and watch the development of these institutions.

8. Gaushalas should work as collecting centres for the useless, old and decrepit cattle which may then be transferred to Gosadans.

9. (*a*) Government should give grants to Gaushalas working in good condition for specific purpose, increasing the number of grants every year.

(*b*) Lands may be given to Gaushalas for production of fodder and pasturage wherever available. Other facilities e.g. Irrigation, Veterinary aid should also be provided.

10. In order to encourage the co-operative movement in the State and also to keep the cities clean, prohibition of keeping animals in cities and asking Ghosis to settle in the rural areas may be given a trial in a city or a part of it. Before undertaking this experiment the milk supply of the town should be ensured through a co-operative organisation.

11. In order to stop the menace of cattle roaming about in cities licensing and registration of cattle in cities should be immediately enforced.

12. The stray and wild animals in the rural areas must be caught by the Village Panchayats with the help of Animal Husbandry Department, tame them and send them to Gosadans.

13. Pastures should be provided in each village or a group of villages. They should be properly managed by the Gram Panchayats.

14. (*a*) For regulation of cattle fairs and markets, an Act should be promulgated.

(*b*) The Cattle Fairs and markets should be licenced.

15. The Hide Flaying Centre at Bakshi-ka-talab should be so organised that only the people who are actually engaged in the trade are trained here in the improved methods of flaying, curring, tanning and better utilisation of carcasses under village conditions. Experiment of Bakshi-ka-talab should be extended to other centres.

16. Every Agricultural Farm should have a minimum number of animals that would fit in its economy to demonstrate the value of mixed farming.

(Sd.)	Din Dayal Shastri, M.L.A., ...	*Chairman.*
(Sd.)	Suresh Prakash Singh, M.L.A., ...	*Member.*
(Sd.)	Babu Lal Mittal, M.L.A., ...	,,
(Sd.)	Vishnu Sharan Dublish, M.L.A., ...	,,
(Sd.)	Virendra Verma, M.L.A., ...	,,
(Sd.)	B. B. Singh, M.L.C., ...	,,
(Sd.)	R. R. Shastri, M.L.C., ...	,,
(Sd.)	Karan Bhai	,,
(Sd.)	H. C. Joshi	*Secretary.*

SUB-APPENDIX V-A

Consolidated statement of livestock slaughtered in slaughter-houses in Uttar Pradesh

Year	No. of recognised slaughter houses for Cattle and Buffs.		No. of unlicensed slaughter houses	Number of animals slaughtered.			
	Government	Local Bodies		Cows	Bulls and bullocks	Calves	Buffs.
1936-37	6	96	33	1,26,828	61,941	19,785	1,12,030
1937-38	5	97	34	1,42,237	58,258	13,826	1,21,817
1938-39	5	97	33	1,18,690	41,991	13,284	1,27,914
1939-40	5	137	39	1,35,379	63,638	28,626	1,54,198
1940-41	3	144	42	1,26,331	55,851	15,970	1,80,891
1941-42	3	141	35	1,25,470	71,156	15,044	2,42,229
1942-43	2	142	17	1,17,207	65,414	20,869	2,05,148
1943-44	2	139	44	76,543	44,483	7,358	1,72,763
1944-45	4	151	44	59,233	60,553	2,244	1,60,881
1945-46	4	163	42	75,345	64,081	4,584	1,82,493
1946-47	2	147	17	81,544	60,067	6,975	1,80,737
1947-48	2	110	7	49,908	44,967	1,628	1,27,434
1948-49	..	119	17	19,024	27,660	2,211	1,70,774
1949-50	..	125	71	27,839	27,175	1,571	2,02,196
1950-51	..	74	12	5,086	10,431	41	2,32,962
1951-52	..	85	37	2,704	25,320	430	2,37,711
1952-53	..	104	45	2,733	6,599	—	2,55,817

*Both for big as well as small animals and not for cattle and buffaloes alone.

APENDIX VI

Report of the Cattle Improvement Legislative Sub-Committee.

The Cattle Improvement Legislation Sub-Committee, along with other three Sub-Committees, was appointed by the Gosamvardhan Enquiry Committee in July, 1953. The constitution of the Sub-Committee and its terms of reference are given below :—

1.	Sri Malkhan Singh, M.L.A.,	*Chairman.*
2.	Sri Rananjai Singh, M.L.A.,	*Member.*
3.	Sri L. D. Asthana, M.L.A.,	„
4.	Sri Gopal Shastri,	„
5.	Sri Ram Naresh Shukla, M.L.A.,	„
6.	Sri Babu Lal Mittar, M.L.A.,	„
7.	Sri Akhtar Husain, M.P.,	„
8.	Sri Mohammad Habib,	„
9.	Sri L. S. Nigam.	*Secretary.*

Terms of reference of the Sub-Committee :—

(i) to examine the various correlated existing legislative measures and their working ;

(ii) to vet the proposed legislation in respect of (*a*) Livestock diseases control (*b*) Livestock Improvement (*c*) Improvement of Gaushalas ;

(iii) to formulate measures for legislation to prohibit unhygienic collection of dairy animals in the urban areas, and

(iv) to examne the Municipal and District Boards' regulations regarding cattle slaughter and cattle pounds.

Proceedings of the First meeting :—

The first meeting of the Cattle Improvement Legislation Sub-Committee was held on August 17, 1953 when the following Members were present :—

1. Sri Malkhan Singh, M.L.A., *Chairman.*
2. Sri Rananjai Singh, M.L.A., *Member.*
3. Sri Gopal Shastri,
4. Sri R. N. Shukla, M.L.A.,

5. Sri B. L. Mittal, M.L.A., *Member.*
6. Sri Akhtar Husain, M.L.A. ,,
7. Sri L. S. Nigam, *Secretary.*

On being asked by the Chairman, the Secretary read out the terms of reference of the Sub-Commitee which are given above.

With regard to the first term of reference the Committee was of the view that it would be better if legislative measures adopted by other State Governments were obtained and circulated to the Members so that they could study them with advantage while considering the question of enacting similar legislation in this State. The Committee also decided to have if possible the advantage of studying legislative measures adopted by some of the foreign countries, which were known for the cattle wealth of their countries, milk and milk-products. Mention was, in this connexion, made of Holland, Switzerland, New Zealand and Australia. The Committee also decided to consider the Cattle Trespass Act, 1871.

The second term of reference *viz.*, to vet the proposed legislation in respect of:

(*a*) Livstock Diseases Control,

(*b*) Livestock Improvement, and

(*c*) Improvement of Gaushalas.

The absence of suitable enactments in the State was considered next on (*a*) and (*b*) was felt by some of the Members.

In regard to the third term of reference, the Sub-Committee held a general discussion. It was felt that the matter was an important and a serious one. The practice of keeping milch herds in the urban areas has been in operation since times immemorial. The Members realise that milch herds in the urban areas are kept under most unhygienic conditions and the keepers of such cattle are to a great extent, responsible for supplying contaminated milk to the consumers and although adequate legislation already exists for ensuring quality in milk, it seems perhaps to be no man's job to find out the conditions under which such milk is produced. During the course of discussions, it was brought to the notice of the Members that milch cattle kept in the urban areas were seen eating 'filthy' substances. The Members realise that although section 242 of the U. P. Municipalities Act, 1916, lays down sufficient punishment in this matter, but what is sadly lacking is an efficient machinery that might implement the provisions laid down in the statute book.

As regards the fourth term of reference the consensus of opinion was that adequate provision did exist on some of the Local Laws regulating cattle slaughter and cattle pounds. A detailed discussion of the two was postponed for some later date.

Proceeding of the second meeting.

The second meeting of the Cattle Improvement Legislation Sub-Committee was held on September 15, 17, 1953, when the following were present :

1.	Sri Malkhan Singh, M. L. A.,	*Chairman.*
2.	Sri Rananjai Singh, M. L. A.,	*Member.*
3.	Sri L. D. Asthana, M. L. A.,	"
4.	Sri R. N. Shukla, M. L. A.,	"
5.	Sri B. L. Mittal, M. L. A.,	"
6.	Sri Gopal Shastri	"
7.	Sri L. S. Nigam.	*Secretary.*

2. Salient points from the following Acts, which had already been sent to the Members by the Secretary, were duly considered :—

1. the Bombay Livestock Improvement Act, 1933,
2. the Bombay Animal Preservation Act, 1948,
3. the Central Provinces and Berar Cattle Sheep and Goats (Slaughter and Movement) Control Act, 1947,
4. the Central Provinces and Berar Animal Preservation Act, 1949,
5. the Madhya Pradesh Animal Preservation (Amendment) Acts, 1951 and 1953,
6. the Bihar Preservation and Improvement of Animals Bill, 1953 (which has since been enacted) ;
7. the Madhya Pradesh Livestock Improvement Act, 1950 ;
8. the Central Provinces Cattle Diseases Act, 1934 ;
9. the Bombay Essential Commodities and Cattle (Control) Act, 1946 ;
10. the Madaras Livestock Improvement Act, 1948.

3. The Committee also took up consideration of the U. P. Livestock Improvement Bill 1948 and suggested that it might be split up into two parts *viz.*, improvement and preservation. A draft of the U. P. Livestock Improvement Act is annaxed herewith. Subsequently it came to the notice of the Sub-Committee that the Government of India in the Ministry of Food and Agriculture had circularised a model Act, captioned the Animal Preservation Act, for adoption by various State Governments. The preservation of cattle by controlling the slaughter thereof was considered by the Sub Committee in the context of considerations prevailing in the State. The matter was also considered by the Sub-Committee in its tour of Banaras, Allahabad, Faizabad, Hardwar (Saharanpur) and Rishikesh (Dehradun), where the Sub-Committee recorded the evidence of certain officials and non-officials whose names are indicated in the enclosed list.

Most of the witnesses were of the view that the slaughter of cow and her progeny should be banned by some enactment and that persons found guilty of the offence should be punished severely.

The Committee is of the opinion that apart from the deeply rooted religious sentiments of a very large number of the residents of Uttar Pradesh, it is not only desirable but imperative in the interests of national economy, national health and national goodwill to save, protect and improve the cow and her progeny. Among other measures to serve this, the Committee is strongly of the opinion that the slaughter of the cow and her progeny should be totally banned.

For a number of reasons, the Sub-Committee is not in favour of the draft Bill recently sent by the Government of India imposing a partial ban on the slaughter of cows.

Having considered the pros and cons of the problem, the Sub-Committee is firmly of the opinion that in the totality of the circumstances, cow slaughter be totally banned by the State by legislation once for all. Heavy penalties must be provided for an offence against such a law.

With immediate effect, slaughter of cows in unauthorised premises must be put down with a strong hand.

For such a ban by legislation to be successful and effective, mass consciousness in favour of the cow and her breed must be awakened and rekindled by non-official agencies and organisations working in a constructive spirit in this sphere of national life.

Proceedings of the third meeting.

The third meeting of the Cattle Improvement Legislation Sub-Committee was held on September 29 and 30, 1953 under the Chairmanship of Sri Malkhan Singh, M. L. A. The following were present.

1.	Sri Malkhan Singh, M. L. A.,	*Chairman.*
2.	Sri Rananjai Singh, M. L. A.,	*Member.*
3.	Sri L. D. Asthana, M. L. A.,	"
4.	Sri Ram Naresh Shukla, M. L. A.,	"
5.	Sri B. L. Mittal, M. L. A.,	"
6.	Sri Akhtar Hussain, M. P.,	"
7.	Sri Gopal Shastri,	"
8.	Sri L. S. Nigam.	*Secretary.*

2. The Sub-Committee considered the U. P. Animal Diseases and Pests Bill, 1948 and the U. P. Gaushala Bill, 1950. In regard to the U. P. Animal Contagious Diseases and Pests Bill, 1948, the sub-committee was of the view that it was impossible to consider the Bill in its proper prospective without having a first hand knowledge of the various animal diseases

which the Bill contemplated to remedy. It was, therefore, decided that the Bill, which was originally drafted under the technical advice of the Officers of the Animal Husbandry Department should be commended to the main Committee for their consideration.

3. The consideration of the U. P. Gaushala Bill, 1950, was thereafter taken up along with the Bihar Gaushala Act, 1950. The Committee suggested certain amendments to the U. P. Bill, 1950. A copy of the Bill, as amended, is enclosed for consideration by the main committee.

4. The Sub-Committee also took up consideration of the Cattle Trespass Act, 1871 and was of the opinion that cases under the aforesaid Act should be tried by a Magistrate of the first class, so that persons found guilty of the offence might be fined heavily and the sufferers compensated adequately from fines so realised. It was further suggested that the scales of fines, at present, prescribed under the Act should be raised so that they might have a deterrent effect.

Proceeding of the fourth meeting.

The fourth meeting of the Cattle Improvement Legislation Sub-Committee which was held on November 19, 20, 1953 was attended by :—

1.	Sri Malkhan Singh, M. L. A.,	*Chairman.*
2.	Sri Rananjai Singh, M. L. A.,	*Member.*
3.	Sri L. D. Asthana, M. L. A.,	"
4.	Sri R. N. Shukla, M. L. A.,	"
5.	Sri B. L. Mittal, M. L. A.,	"
6.	Sri Akhtar Hussain, M. P.,	"
7.	Sri L. S. Nigam,	*Secretary.*

After some informal discussions, the Sub-Committee decided to visit Banaras, Allahabad, Faizabad, Hardwar (District Saharanpur) and Rishikesh (district Dehra Dun) in order to ascertain the views of certain officials and non-officials in regard to the task that lay ahead of the Sub-Committee. The names of persons/institutions to be invited are given in the annexed schedule.

So far as the third term of reference of the Sub-Committee was concerned, it was considered that there could not be any second opinion on the point that milch herds in urban areas were maintained under most insanitory conditions and this was primarily responsible for the supply of contaminated milk to the consumers. The ill-effect of this could be easily seen on children of tender age and elderly people were also its prey. A beginning might be made with the licensing of milch herds in the urban areas—licences being issued only to those, who were able to satisfy the licensing authorities, that they had enough of stabling facilities. In the absence of stabling facilities, licences should not be granted. This would

have the additional advantage of combatting the menace caused by stray cattle in cities. Members of the committee were emphatic on the point, that the problem of stray cattle in urban area was causing a great havoc. In actual practice what happened was that milch cattle were let loose after milking and those not in milk were left uncared for by the owners. Such cattle were mostly responsible for damaging orchards and plantations in the urban areas and causing untold suffering and doing immense damage to the fields lying on the border. The licensing system, if properly enforced, would have a two fold check on the unhygienic collection of dairy herds and the problem of stray cattle. The licence referred to above might be on the lines of one prescribed with the Bombay Cattle Control Order, 1949 issuued under the Bombay Essenital Commodities and Cattle (Control) Act, 1946.

While considering the fourth term of reference *viz.*, to examine the Municipal and District Board's regulation regarding cattle slaughter and cattle pounds, the committee was of the view that the rules regarding slaughter of cattle would have to be modified in the light of proposed legislation regarding cattle slaughter. So far as the rules regarding cattle pounds were concerned the Sub-Committee was of the view that the present scale of fines on impounded cattle was inadequate and that it should be raised.

Summary of recommendations.

1. Existing legislations in the State require suitable amendments in the light of the recommendations of the Sub-Committee and whatever else may be decided upon.

2. The U. P., Animal Contagious Diseases and Pest Bill, the U. P. Livestock Improvement Bill and the U. P., Gaushala Bill should be enacted as early as possible. Simultaneously immediate steps should be taken for the enactment of the U. P. Animal Preservation Act on the lines indicated in the body of the report.

3. Milch herds in urban areas should, in the first instance, be licensed on the lines of the Bombay Cattle Control Order, 1949.

4. Regulations regarding cattle slaughter may be modified in the light of proposed legislation in the scale of fines on empounded cattle should be raised so that it may have deterrant effects on the owners who let them loose.

(Sd.)	Malkhan Singh, M. L. A.,	*Chairman.*
"	Rananjai Singh, M. L. A.,	*Member.*
"	L. D. Asthana, M. L. A.,	"
"	Gopal Shastri,	"
"	Ram Naresh Shukla, M. L. A.,	"
"	Babu Lal Mittal, M. L. A.,	"
"	Akhtar Husain, M. P.,	"
"	L. S. Nigam,	*Secretary.*

SUB-APPENDIX VI-A

THE U. P. GAUSHALAS BILL, 1954

A BILL to provide for better management and control of Gaushalas in Uttar Pradesh.

Whereas it is expedient to provide for better management and control of Gaushalas in Uttar Pradesh. Preamble.

It is hereby enacted as follows :—

1. (1) This Act may be called the Uttar Pradesh Gaushalas Act, 1954. Short title, extent, commencement and exemption.

(2) It extends to the whole of the Uttar Pradesh.

(3) This section shall come into force atonce and the remaining sections shall come into force on such dates and in such areas as the State Government may by notification in the official *Gazette*, direct.

(4) The State Government, may, by notification in the official *Gazette*, direct that all or any of the provisions of this Act shall not apply to any Gaushala or class of Gaushalas as may be specified.

2. In this Act, unless there is any thing repugnant in the subject or context :— Definitions.

(1) 'Cattle' includes any domestic animal of the bovine species.

(2) 'Registrar' means the Registrar of Gaushalas appointed by the State Government.

(3) 'District' means a district constituted by the State Government for administrative purposes.

(4) 'Director of Animal Husbandry' means the officer appointed by the State Government for the time being to be the Director of Animal Husbandry and includes any other officer appointed to perform the duties of the Director of Animal Husbandry under this Act.

(5) 'Federation' means the U. P. State Federation of Gaushalas and *Pinjrapoles* registered under the Societies Registration Act, 1860.

(6) 'Gaushala' means a charitable institution established for the purpose of keeping, breeding, rearing or maintenance of cattle or for the purpose of reception, protection, and treatment of infirm, aged or diseased cattle and includes a *pinjrapole* where such cattle are kept.

(7) 'Gaushala Property means the property, whether movable or immovable, vesting in or held in trust for the use and benefit of a Gaushala and includes the amount realised for this purpose by any trader from his customers, or by any person on behalf of Gaushala from the public.

(8) 'Prescribed' means prescribed by rules made under this Act.

(9) 'Regulations' means regulations made under provisions of this Act.

(10) 'Rules' mean rules made under this Act.

(11) 'Trustee' means a person or body of persons by whatever designation known, in whom the administration of any Gaushala property vests and includes any person liable to accounts for any Gaushala property as a trustee.

Obligations to furnish particulars relating to Gaushalas.

3. (1) Every trustee shall in the case of " (i) a Gaushala established before the commencement of this Act, within six months from the commencement of this Act; and (ii) a Gaushala established after the commencement of this Act, within six months of the vesting in or assumption by him of the administration of the gaushala property of such Gaushala".

Submit to the Registrar of Gaushalas a statement in the prescribed form and accompanied by the prescribed fee, containing the following particulars, namely :—

(*a*) the names and addresses of the trustees and the mode of succession to the office of the trustee prescribed by the deed or instrument of trust, if any, or by custom or usage relating to the Gaushala;

(*b*) full details of the Gaushala property;

(*c*) the gross annual income of such property for the three years immediately preceding the date on which the statement is submitted or of the period which has elapsed since the establishment of the Gaushala whichever is shorter;

(*d*) the ordinary sources of such income;

(*e*) where the source of income includes any customary or usual deduction or collections made by traders, the full particulars of such ways and means and the rate or rates thereof;

(*f*) the amount of annual estimated expenditure in connexion with the Gaushala or the expenditure incurred during the period to which the particulars under clause (c) relate; and

(*g*) any other particulars which may be prescribed.

(2) A copy of the deed or instrument establishing or the constitution of the Gaushala or such extract thereof as in the opinion of the court sufficiently shows the origin, nature and object of such Gaushala, shall accompany such statement, or if no such deed of instrument has been executed or constitution made or if a copy thereof cannot be obtained, such statement shall contain full particulars so far as they are known to the trustee of the origin, nature and object of the Gaushala.

(3) Such statement shall be signed by each trustee or his agent specially authorised in this behalf. In the case of a Gaushala being administered by a Managing Committee, such statement shall be signed by all the office bearers of the Gaushala.

(4) Every person signing the statement shall verify it in the manner prescribed.

(5) The registrar may for sufficient reasons extend the period for furnishing a statement under this section.

Power of Court to hold enquiry.

4. (1) The Registrar may, either on its own motion or on the application of any person claiming to have an interest in a Gaushala or on the application of an officer not below the rank of an Inspector of the Animal Husbandry Department, hold an enquiry in the prescribed manner at any time to ascertain :—

(*a*) what constitutes the Gaushala property of such a Gaushala ;

(*b*) the trustee or trustees of such a Gaushala ;

(*c*) the mode of succession to the office of trustee prescribed by any deed of instrument or constitution of trust or any custom or usage relating to such a Gaushala ;

(*d*) the income or expenditure of such a Gaushala and

(*e*) the sources of income of such Gauthalas.

(2) In every inquiry under this section the court shall cause notice of such inquiry to be given to the Director of Animal Husbandry to appear by his agent or otherwise.

Register of Gaushalas.

5. (1) On receiving a statement under section 3 or after holding an inquiry under section 4 the court shall record entries in such form as may be prescribed, in a register to be called the Register of Gaushalas and shall file the statement.

(2) Copies of entries so recorded shall be forwarded to the Director of Animal Husbandry and the President of the Federation.

Amendment of entries in register of Gaushalas.

6. (1) When any change occurs in the names of trustees or any Gaushala property or the conditions of the trust or in such other particulars relating to Gaushalas as may be prescibed, the trustee shall, within three months of the occurrence of such change, report to the court such change in a statement in the prescribed form. The provisions of section 3 shall, so far as may be, apply to such statement.

(2) For the purpose of verifying the correctness of the entries in the Register of Gaushalas and ascertaining whether any change, as may be prescribed, has occurred in any of the particulars recorded in such Register, the court may hold an inquiry in the prescribed manner and the provisions of section 4 shall, so far as may be, apply to such inquiry.

(3) If the court, after receiving a report under sub-section (1) and holding an inquiry, if any, under sub-section (2), is satisfied that a change has occurred in any of the particulars recorded in the Register of Gaushalas with regard to a Gaushala, it shall amend in the prescribed manner the entry or entries affected by such change and shall file the statement furnished under sub-section (1) along with the statement, if any, relating to the Gaushala filed under section 3.

(4) A copy of the amendment so made shall be forwarded to the Director of Animal Husbandry and the President of the Federation.

Matintenance of accounts and their audit.ene

7. (1) Every trustee of a Gaushala, which has been registered under section 5, shall keep regular accounts of all moveable and immovable property received, except such articles as are of perishable nature, and of all encumbrances created on the Gaushala property and of all payments and alienations made on behalf of the Gaushala be maintained. Such accounts shall be in such form and shall contain such particulars as may be prescribed.

(2) The accounts shall be balanced each year on the Gopashtami day. The accounts so balanced shall be examined and audited annually in such manner and by such person as may be prescribed.

(3) Every auditor acting under sub-section (4) shall have access to the accounts and to all books, vouchers and other documents and records in the possession of or under the control of the trustee.

(4) Within six months after the date of the year for which the accounts are balanced every trustee shall prepare and furnish to the Registrar a full and true statement of the accounts, in such form and containing such particulars as may be prescribed, together with the audit note, if any, relating thereto ;

Provided that the Registrar may, if he is satisfied that there is any sufficient cause for so doing, extend the time for furnishing any statement of accounts and audit note under this section.

Penalties.

8. (1) If any trustee does without lawful excuse fail or neglect to submit a statement to the court as required under section 3 or 6 or submits a statement under any of these sections which he knows or has reason to believe to be false in any material particular, he shall on conviction be liable to a fine not exceeding five hundred rupees.

(2) If any trustee does without lawful excuse fail or neglect to keep accounts or to furnish statement of accounts under section 7 or does furnish a statement which he knows or has reason to believe to be false in any material particular he shall on conviction, be liable to a fine not exceeding two hundred rupees.

(3) If any person contravenes any provisions of this Act or of any rule or regulation or fails to comply with any order made under or in pursuance thereof, he shall if no other penalty is elsewhere provided in this Act, rule or regulation for such contravention, on conviction, be punishable with fine which may extend to one hundred rupees.

(4) Any court may, in passing an order of conviction for any offence under sub-section (1), (2) or (3) specify a period within which the person so convicted shall comply with the provisions of this Act, rules or regulations which may be found to have been contravened by him and also order payment of a daily fine not exceeding twenty rupees for every day during which the default continues after the expiry of the period so specified ;

Provided that if the person failing to comply with and provision of or direction under this Act, rules or regulations, satisfied the court that there was good reason for his failure to do so and applied for extension of the period specified under this section, the court may, in its discretion extend the period and may remit the whole or any part of the fine paid or payable.

Cognisance of offences.

9. (1) No prosecution under this Act shall be instituted except on the complaint of the court within whose jurisdiction the Gaushala in respect of which the offence is committed is situated.

(2) No criminal court inferior to that of a magistrate of the first class shall try any offence under this Act.

Bar to prosecution of persons acting in good faith.

10. No suit, prosecution or other legal proceeding shall lie against any person for anything which is in good faith done or intended to be done in pursuance of any order made under this Act.

Management of Gaushalas.

11. Every Gaushala registered under this Act shall be managed in accordance with the rules and regulations made under this Act.

Fixation of area of Gaushalas.

12. (1) The Director of Animal Husbandry shall, on receipt of the copy of an entry in the Register of Gaushala fix the area on the recommendation of the Federation within which such Gaushala shall function and from which such Gaushala may receive money realised by the traders from their customers, in the manner prescribed.

(2) In case of difference of opinion between the Federation and the Director of Animal Husbandry, the final decision shall lie with the State Government.

Bar to realize money for Gaushala outside the area.

13. It shall not be lawful for any merchant or trader having his place of business within any area fixed under section 12 to realise money from his customers for any Gaushala other than that situate within such area.

Payment of money to Gaushala.

14. Every merchant or trader shall at the close of every financial year followed by the Gaushala, remit the full amount of money realised under section 13 to the Gaushala within the area and obtain a receipt therefor.

Punishment for failure of payment by Gaushala.

15. If any merchant or trader fails to deposit the amount realised for the Gaushala as specified in section 14 within a period of 2 months after the prescribed date he shall, on conviction, be punishable with fine not exceeding five hundred rupees and the provision of sub-section (4) of section 8 shall also apply.

Inspection of account books by court.

16. The Registrar may, on the application of the trustee or the Director of Animal Husbandry, call for the account books of any merchant or trader to ascertain in the manner it may deem fit whether he has paid the entire amount realised by him for the purpose to the Gaushala situated within his area, but no inspection of such account books by any other person shall be allowed.

Inspection of Gaushala after reasonable notice.

17. An officer of the Animal Husbandry Department, not below the rank of an Inspector, or any other person duly empowered in this behalf by the State Government may, enter into and inspect any Gaushala or any place appertaining to such Gaushala for the purpose of satisfying himself that the provisions of the Act, rules or regulations are duly complied with.

Appeal.

18. Any person aggrieved by an order of the Registrar may appeal to the High Court.

Application of Civil Procedure Code 1908 to proceedings.

19. Except in so far as they may be inconsistent with any thing contained in this Act, the provisions of the Code of Civil Procedure 1908 shall apply to all proceeding under this Act.

Savings.

20. Except as provided in this Act, no court shall entertain any suit or proceeding or pass any order or decree or execute any order or decree if the claim involved in such suit or proceeding or if the passing of such order or decree or such execution would be inconsistent with any order passed under this Act, rules or regulations.

Grants to Gaushalas.

21. The State Government may make grants of money or of lands free of price or free of revenue whether in perpetuity or for a term of years, to a Gaushala on such terms including those resumption or otherwise on failure to observe the conditions of the grant or the provisions of this Act or rules or regulations, as may be prescribed.

Power to make regulations.

22. The Director of Animal Husbandry may, with the previous sanction of the State Government, make regulations in respect of the following matters, namely :—

(1) provision of skilled technical management of breeding work at a Gaushala and supervision thereof ;

(2) segregation of breeding work at a Gaushala from other activities thereof and the transfer of such work from urban to rural areas ;

(3) transport of breeding bulls from a Gaushala to any other place for purposes of breeding ;

(4) sale of selected male stock of cattle to the Director of Animal Husbandry at a reasonable price.

(5) medical treatment and inspection of cattle at a Gaushala ;

(6) maintenance and management of breeding records at a Gaushala ;

(7) setting aside of cattle both male and female for breeding purposes ;

(8) maintenance of a competent and qualified manager at a Gaushala ; and

(9) any other matter analogous to those set forth above.

Power to make rules.

23. (1) The State Government may by notification in the official *Gazette* make rules for the purpose of carrying into effect the provisions of this Act.

(2) Without prejudice to the generality of the foregoing power, such rules may provide :

(*a*) the form of statement to be submitted and the fee to be paid with such statement under section 3 (1) ;

(*b*) the manner in which the court shall hold inquiry under section 4 (1) ;

(*c*) the form of register of Gaushalas to be maintained by the court under section 5 ;

(*d*) the form of statement for amendment of entries in the Register of Gaushalas under section 6 (1) ;

(*e*) the form of register of Gaushalas to be maintained by a trustee under section 7 (1) and the audit thereof ;

(*f*) the conditions subject to which grants of money or of lands shall be made under section 21 ;

(*g*) the manner in which the funds held for the use or benefit of a Gaushala or other Gaushala property shall be invested or disposed of ; and

(*h*) the manner in which money for Gaushalas may be realised by the traders from their customers, and the manner in which it is to be disbursed.

Bar of application of the Charitable and Religious Trusts Act 1920.

(3) The power to make rules under this section shall be subject to the condition of the rules being made after previous publication.

Act no. XIV of 1920.

24. The provisions of the Charitable and Religious Trusts Act 1920 (XIV of 1920) shall not apply to any Gaushala registered under this Act.

STATEMENT OF OBJECTS AND REASONS

There is at present acute shortage of bulls as well as of bullocks required for breeding and draught purposes. Since Agriculture is mainly dependent on bullock power, the Provincial Government is making every effort to improve the situation ; but it is realised that with its limited resources it is not possible for the Government to speed up the work in this direction without enlisting the support and cooperation of non-official institutions such as Gaushalas and *Pinjrapoles,* who are engaged in maintaining cattle both productive and unproductive through out the province. According to the recent survey undertaken by the Gaushala Development Officer, U. P., the number of such Gaushalas spread over all the province is 166 ; the number of productive and unproductive cattle maintained at these Gaushalas is approximately 5,500 and 8,000 respectively. The main source of their income is subscription from the general public and the collection by traders from their customers of a cess called 'Dharmada'. Their total estimated income per annum is Rs.14 lakhs. It may increase to Rs.50 lakhs per annum if the Dharmada deducted by the traders in the name of Gaushalas is paid in full. The management of these Gaushalas is also far from satisfactory. It is, therefore, considered that much improvement in the condition of the livestock of this province can be effected, if the finances of these institutions are placed on a sound footing and they are made to run on proper lines. Both the objects in view can be secured only by means of a legislation. The present Bill has accordingly been drafted which aims at :—

(i) Making the management of the Gaushalas in this province efficient ; and

(ii) legalising the collection by traders from their customers and payment thereof in full to the Gaushala of the area concerned of the cesss called 'Dharmada'.

The Bill when enacted will increase the utility of the Gaushalas and help the Government and the people in improving the condition of the cattle which is one of the most urgent problem facing the country.

SUB-APPENDIX VI–B

UTTAR PRADESH LIVE-STOCK IMPROVEMENT BILL, 1954.

A Bill to provide for the improvement of Livestock.

1. *Short title, extent and commencement.*—(1) This Bill may be called the U. P. Livestock Improvement Bill, 1954.

(2) It extends to the whole of the State of Uttar Pradesh.

(3) Sections 1 and 2 shall come into force at once and the remaining provisions shall come into force in such areas and on such dates as the State Government may by notification in the Official *Gazette,* specify ; and the Gaon Sabha of any area or the Livestock Expert or any other person interested may by a written application, move the State Government to take action under this sub-section.

2. *Definitions.*—In this Bill, unless the context othewise requires,—

(*a*) "cow" includes a heifer ;

(*b*) "licence" means a licence granted under section 5 ;

(*c*) "Live-Stock Expert" means the officer appointed by the State Government under section 3 to be the Livestock Expert for the State of U. P.

(*d*) Live-Stock Officer" means an officer appointed as such under section 3 and includes the Livestock Expert ;

(*e*) "Prescribed" means prescribed by rules made under this Bill ;

(*f*) "a person is said to keep a bull" if such person owns the bull or has the bull in his possession or custody.

3. *Appointment of Live-Stock Expert and Live-Stock Officer.*—The State Government may by notification in the official *Gazette,* appoint a person to be the Livestock Expert for the State of U. P., and may also appoint any officer of the animal husbandry department to be a Live-stock Officer and assign to such officer such powers and duties under this Bill as may be specified in such notification.

4. *Prohibition of keeping bull for breeding purposes.*—No person shall keep for breeding purposes a bull which has attained the prescribed age except under and in accordance with the terms and conditions of a licence granted under section 5.

5. *Grant of licence.*—A licence for keeping a bull shall be granted by the Live-Stock Officer in such form, for such period, and subject to such terms, conditions and restrictions as may be prescribed :

Provided that no fee shall be charged for the grant of such licence.

6. *Refusal to grant or revocation of licence.*—(1) Subject to the rules made under this Bill, the Livestock Officer may refuse to grant a licence for keeping a bull or revoke any such licence if in his opinion the bull appears to be :

(*a*) of defective or inferior conformation and likely to beget defective or inferior progeny ;

(*b*) permanently affected with any contagious or infectious disease ; or

(*c*) permanently affected with any other disease rendering the bull unsuitable for breeding purposes.

(2) The Live-stock Officer may also revoke a licence if in his opinion any breach of any of the terms or conditions of the licence has been committed.

(3) No person shall be entitled to any compensation on the revocation of a licence under sub-section (1) or sub-section (2).

(4) If a licence is revoked under sub-section (1) or sub-section (2) the Live-stock Officer shall give notice of such revocation to the owner or the person stated therein to be the owner of the bull stating therein the grounds of revocation.

(5) If the notice is duly given in accordance with the last foregoing sub-section to a person, who is not the owner of, but has in his possession or custody, the bull, it shall be the duty of that person forthwith to take all reasonable steps to inform the owner accordingly, and if he fails to do so, he shall indemnify the owner against any loss the owner may suffer by reason of the failure.

7. *Grant of duplicate licence.*—If the Livestock Officer is satisfied that a licence granted under section 5 has been lost or destroyed, he may, subject to such conditions as may be prescribed, issue to the holder of the licence a duplicate thereof and thereupon all the provisions of this Bill with respect to the licence shall apply to the duplicate as if it were the original licence.

8. *Duration of licence.*—A licence granted in respect of a bill shall remain in force until—

(*a*) the period specified therein expires, or

(*b*) it is revoked, or

(*c*) the bull dies or is castrated in the prescribed manner.

9. *Inspection of bulls.*—Any person who keeps a bull shall at any reasonable time, either at the place where the bull is for the time being or at such other place as the Live-stock Officer may, from time to time direct, submit the bull for inspection by the Live-stock Officer when required by such officer to do so and render all reasonable assistance to that officer for the purposes of inspection.

10. *Power to order castration of bulls.*—(1) The Livestock Officer may, by notice served in the prescribed manner on the owner or other person keeping the bull, require that any bull, which has attained the prescribed age at the date when the notice is served and in respect of which no licence is for the time being in force under this Bill, shall be castrated in the prescribed manner within one month after the notice takes effect.

(2) Such castration shall, if the owner or other person who keeps the bull requires, be performed or caused to be performed by the Live-stock Officer free of charge.

(3) If a notice under this section is duly served on a person who is not the owner of but has in his possession or custody the bull it shall be the duty of such person forthwith to take all reasonable steps to inform the owner accordingly, and if he rans to do so, he shall be able to indemnity the owner against any loss the owner may suffer by reason of the failure.

11. *Duty to produce licence.*—It shall be the duty of every person who for the time being keeps a bull in respect of which a licence is in force to produce the licence—

(*a*) within a reasonable time on demand made by the Live-stock Officer or any officer of the veterinary department authorised by general or special order by the State Government in this behalf in any place where the bull is for the time being;

(*b*) before a cow is served by a bull on demand made by the person in-charge of the cow.

12. *Penalty for keeping a bull in contravention of this Bill or rules.*—whoever, in contravention of this Bill or of any rules or orders made under this Bill or of any of the terms, conditions or restrictions of a licence keeps a bull shall, on conviction, be punishable with fine which may extend to twenty-five rupees, and in the case of a continuing contravention, with a fine which may extend to two rupees for every day after the date of first conviction during which the contravention is continued.

13. *Penalty for neglect or failure to comply with notice under section 6 or 10.*—Whoever neglects or fails to comply with a notice served in accordance with section 6 or section 10 shall, on conviction, be punishable with fine which may extend to twenty-five rupees.

14. *Penalty for neglect or failure to comply with requisition under section 9 or 11.*—Whoever neglects or fails to submit a bull for inspection when required by the Live-stock Officer for inspection under section 9 or whoever fails to produce a licence when required to do so in accordance with the provisions of section 11 shall, on conviction be punishable with fine which may extend to twenty five rupees.

15. *Power of Live-stock Officer to castrate.*—Whenever an offence under section 14 has been committed, or whenever any bull has not been castrated in compliance with the notice served under section 10 it shall be competent for the Live-stock Officer—

(1) to castrate or cause to be castrated in the prescribed manner and free of charge the bull in respect of which such offence was committed or such notice was served, as the case may be;

(2) to seize any bull, if the person, in whose ownership, possession or custody, the bull for the time being is, not known or cannot be ascertained after an inquiry in the prescribed manner, and on such seizure, if he is of opinion that such bull has attained the prescribed age or is suffering from any of the defects or diseases specified in section 6 to direct that the said bull be—

(*a*) castrated in the prescribed manner, and

(*b*) sold by public auction or sent to a Pinjrapole.

Provided that if the owner of the said bull appears within fifteen days of such seizure and proves to the satisfaction of the Live-stock Officer that the said bull is of his ownership; the said bull—

(i) if not sold by public auction, or

(ii) if sent to a Pinjrapole, shall be delivered to such owner on payment of the expenses incurred for the maintenance of the said bull and determined in the prescribed manner, or

(iii) if sold by public auction, the proceeds of such sale shall be paid to such owner after deducting therefrom the expenses incurred for the maintenance and sale of the said bull and determined in the prescribed manner.

16. *Power of Live-stock Officer to inspect or mark a bull or to enter premises.*—For the purposes of this Bill the Live-stock Officer shall have power at all reasonable times—

(*a*) to inspect any bull,

(*b*) to mark any bull with the prescribed mark in the prescribed manner,

(*c*) to enter any premises or other place in the prescribed manner where he has reason to believe that a bull is kept.

17. *Officers bound to assist Live-stock Officer.*—Every village officer or officer of the departments of Revenue, Agriculture and Animal Husbandy, shall be bound—

(*a*) to give immediate information to the Live-stock Officer of the commission of any offence, or the intention or preparation to commit any offence punishable under this Bill which may come to their knowledge ;

(*b*) to take all reasonable measures in their power to prevent the commission of any such offence which they know or have reason to believe is about to be committed ; and

(*c*) to assist the Live-stock Officer in carrying out the provisions of this Bill.

18. *Cognizance of offence under this Bill.*—No Court shall take cognizance of any offence under this Bill, except in a complaint made by the Live-stock Officer or any person authorised by such officer in that behalf.

19. *Livestock Officer to be public servant.*—The Livestock Officer shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code (Act XLV of 1860).

20. *Protection of persons acting in good faith and limitations of suits and prosecutions.*—(1) No suit, prosecution or other legal proceedings shall be against any person for anything which is in good faith done or intended to be done under this Bill or Rules made thereunder.

(2) No suit shall be instituted against Government and no prosecution or suit shall lie against any Live-stock Officer in respect of anything done or alleged to have been done in pursuance of this Bill, unless the suit or prosecution has been instituted within four months from the date of the act complained of.

21. *Revision.*—(1) The State Government may call for and examine the record of any order or proceedings of the Live-stock Officer for the purpose of satisfying itself as to the legality and propriety thereof.

(2) If in any case it appears to the State Government that any order or proceedings so called for should be modified, annuled or reversed they may pass such order as they may deem fit.

22. *Power to make Rules.*— (1) The State Government may, by notification in the Official *Gazette*, make rules for the purpose of carrying into effect the provisions of this Bill.

(2) In particular and without prejudice to the generality of the foregoing powers such rules may provide for—

(*a*) the age of a bull after which it shall not be kept without a licence for breeding purposes,

(*b*) the form of the manner in which the terms, conditions and the restrictions subject to which a licence shall be granted, transferred or renewed,

(*c*) the conditions subject to which a licence may be revoked,

(*d*) the manner in which notices shall be served,

(*e*) the conditions subject to which a duplicate licence may be granted,

(*f*) the manner in which a bull shall be castrated and the manner in which inquiry regarding the ownership of a bull shall be made and the expenses for the maintenance and sale of a bull shall be determined,

(*g*) the manner and form in which a bull shall be marked and the manner in which the Live-stock Officer shall enter any premises or other place.

3. Rules made under this section shall be subject to the condition of previous publication.

23. *Power of Government to apply the provisions of this Bill to buffalo bulls.*—The State Government may, by notification in the Official *Gazette,* direct that all or any of the provisions of this Bill which have been extended to any village shall apply to buffalo-bulls in such village from the date specified in such notification, and thereupon references to bulls and cows in this Bill so applied shall be construed as references to buffalo-bulls and buffalo-cows respectively and this Bill shall apply accordingly.

Reasons for the enactment.—There is at present no law in force in Uttar Pradesh as in other States providing for the licensing of bulls kept for breeding purposes or for the compulsory castration of bulls which are likely to beget inferior or defective progeny or which are permanently affected by infectious or contagious diseases. Such a law is essential in the interests of improving the live-stock in the State. Hence the present Bill.

APPENDIX VII

Report of the Sub-Commitee on 'Sray Cattle'

In accordance with the decision of the Gosamvardhan Enquiry Committee held on April 6, 1954, under the Chairmanship of Dr. Sita Ram, a sub-committee, with the following personnel, was appointed to report on the possible organisation or agency which should collect and transport stray cattle right from the urban and rural areas to their destination *viz.* the Gosadans :

1.	Sri Din Dayal Shastri	*Chairman.*
2.	Sri Malkhan Singh	*Member.*
3.	Sri Ram Naresh Shukla	"
4.	Sri H. B. Shahi	"
5.	Rai Bajrang Bahadur Singh, Raja of Bhadri	*Convener.*

2. The Sub-Committee met at the residence of Raja Sahib of Bhadri the same evening and examined the whole question in detail. The Sub-committee was candidly of the view that after imposition of complete ban on the slaughter of cows and their kine, the problem of stray and wild cattle will be the most serious bottleneck in the progress of the implementation of the recommendation under consideration. The problem has two facts viz., that of (*a*) the urban areas and (*b*) the rural areas.

3. In respect of the *urban areas,* the Sub-committee was of the view that rounding up of stray cattle should be the primary duty of the Municipal Boards who should appoint ' mobile squads ' for the purpose in view. Apart from directly handling such animals themselves, these squads should assist those—individual or organisations—who volunteer to assist in the task. After rounding up of the unwanted cattle, they should be moved to the collecting centres, which might be either Goshalas or other improvised centres especially established for this purpose. Cattle so collected will then be transported with least possible delay to the nearest Gosadan. In order that this plan functions effectively in urban areas, it was essential, in the opinion of the Sub-committee, that in each city or town, a small committee should be constituted by each Municipality which should include representatives of the Municipal Board, local Bar Association, Arya Samaj and other effective organisations who would actively participate in this humanitarian work. This Committee should take up *inter alia* the task of (i) building up of an effective and smoothly working organisation for implementation of this plan (ii) collection of donations and voluntary contributions to make the plan self-financing (iii) inspection of Gosadan if there is one nearby and (iv) constant propaganda and education of the public in regard to the protection of the cow and its progeny and working out ways and means of achieving this objective.

4. As to the rural areas, the Sub-Committee was of the view that it should be primarily the duty of the Gaon Sabhas to organise work connected with the collection of stray cattle in their respective areas and to transport them to the nearby transit camps which will be esablished by an individual Gaon Sabha, or collecively by a group of them for providing temporary asylum to the unwanted cattle before they moved to the nearest Gosadan.

5. *Expenditure.*—The Sub-Committee feels that it will not be possible for any Government to shoulder the entire financial liability involved in the catching, collecting and transport of stray and wild cattle right from the spot where they are rounded up to their destination *viz.*, the Gosadan. The Sub-Committee is, therefore, candidly of the opinion that expenditure involved in implementing this task should be so split up that the envisaged plan functions smoothly and the burden on Exchequer is reduced to the barest minimum. In the opinion of the Sub-committee, it is essenital, therefore, that in the rural areas, the expenditure connected with the rounding up of stray cattle and bringing them to the village collecting centres (which may be termed 'Transit Camps') should be the sole responsibility of the village organisation. The responsibility of mantainng and feeding such cattle at 'Transit Camp' to the Concentration Camp (Gosadan) should, however, be financed by the State Government. To minimise the cost of transport by rail, wherever unavoidable, the sub-committee suggests that the State Government should seek the assistance of the Railway Board in transport of such cattle either free or at nominal concessional rate. The staff required for this purpose at district level should be provided by the State Government.

6. *Miscellaneous.*—In order that all stray cattle can be moved to the concentration camps, the Sub-committee recommends that the bye-laws of the Municipal and District Boards should be so amended that admission is not refused to any class of livestock in the cattle pounds and that all animals, which are not claimed and disposed off should not be released but sent to the nearest collection centre and finally to the Gosadan.

1. DINDAYAL SHASTRI
2. MALKHAN SINGH
3. RAM NARESH SHUKLA
4. H. B. SHAHI
5. RAI BAJRANG BAHADUR SINGH, *Raja of Bhadri.*

LUCKNOW :
6th April, 1954.

APPENDIX VIII

List of witnesses called by the Gosamvardhan Enquiry Committee to tender evidence

Non-official

1. Sri Shri Ram Sharma, Balki-ki-Basti, Agra.
2. Sri S. K. Ghosh, 4, C. Y. Chintamani Road, Allahabad.
3. Sri Hardeo Sahai, General Secretary, Bharat Gosewa Samaj, 3, Sadar Thana Road, Delhi-6.
4. Sri S. C. Das Gupta, Khadi Pratisthan, 15, College Square, Calcutta.
5. Sri Radha Krishna Bajaj, Gosewa Sangh, Gopuri, Wardha.
6. Sri Radha Kamal Mukerjee, Emeritius Professor of Economics, Lucknow University, Lucknow.
7. Sri Hanuman Prasad Potddar, Gita Press, Gorakhpur.
8. Sri Acharya Narendra Deva, Vice-Chancellor, Banaras Hindu University, Banaras.
9. Sri Bishan Man Singh, Proprietor, Bilandra Farm, District Fatehpur.
10. Sri Acharya Jugal Kishore, Vice-Chancellor, Lucknow University, Lucknow.
11. Sri Trilochan Prasad Singh, Taluqdar, Bainti, District Partapgarh.
12. Sri Dhurendra Shastri, President, Sarvadeshik Arya Pratinidhi Sabha, New Delhi.
13. Sri Seth Govind Das, M. P., President, Bharat Gosewa Samaj, 3, Sadar Thana Road, Delhi–6.
14. Sri Thakur Das Bhargava, M. P., Constitution House, New Delhi.
15. Sri Surya Pal Singh, Raja of Awagarh, District Etah.
16. Sri Swami Hariharanand Sarswati Alias, Karpatriji, President, Bhartiya Ram Rajya Parishad, Banaras.
17. Sri Maulana Hafizur Rahman, M. P., President, Jamait-ul-Ulema Hind, New Delhi.
18. Sri Maulana Husain Ahmad Madni, Sheikh-ul-Hadis, Jamia, Deoband, District Saharanpur.
19. Srimati Mira Behn, c|o Kumari Mridula Sarabhai, Constitution House, New Delhi.

Official

20. Sri Datar Singh, Additional Secretary to the Government of India, Ministry of Food and Agriculture (Agriculture), New Delhi.
21. Sri J. Nigam, I.C.S., Land Reforms Commissioner, U. P. Lucknow.
22. Sri R. N. Singh, I.F.S., Chief Conservator of Forests, U. P., Naini Tal.
23. Sri G. S. Chooramani, Joint Director Panchayat Raj Department. Lucknow.
24. Sri Shri Pat, I.A.S., Drector of Cottage Industries, U. P., Kanpur.

APPENDIX IX

List of witnesses examined by the Gosamardhan Enquiry Committee.

1. Sri. G. S. Chooramani, Joint Director, Panchayat Raj Department, Lucknow.

2. Sri. J. Nigam, I. C. S., Land Reforms Commissioner, U. P., Lucknow.

3 Sri. R. N. Singh, I. F. S., Chief Conservator of Forest, U. P., Naini Tal.

4. Sri R. K. Agarwal, Leather Development Officer, U. P., Kanpur. (Sri Agarwal deputised for the Director of Cottage Industries, U. P.).

5. Sri Thakur Das Bhargava, M. P., New Delhi.

6. Sri Har Deo Sahai, General Secretary, Bharat Gosewak Samaj, Sadar Thana Road, Delhi–6.

7. Sri Dhurendra Shastri, President, Sarvadeshik Arya Pratinidhi Sabha, Shraddhanand Balidan Bhawan, Delhi.

8. Sri S. K. Ghosh, 4, C. Y. Chintamani Road, George Town, Allahabad.

9. Sri Shri Ram Sharma, Balika Basti, Agra.

10. Sri Trilochan Prasad Singh, Taluqdar, Village and P. O. Bainti, district Partapgarh.

11. Sri S. C. Das-Gupta, Khadi-Pratisthan, Sodepur, District 24 Parganas, West Bengal.

12. Sri Radha Krishna Bajaj, Gosewa Sangh, Gopuri, Wardha.

13. Sri Jugul Kishore, Vice-Chancellor, Lucknow University, Lucknow.

APPENDIX X

Names of persons who communicated their views in writing to the Gosamvardhan Enquiry Committee.

1. Sir Datar Singh, Additional Secretary to the Government of India, Ministry of Food and Agriculture (Agri.), New Delhi.
2. Sri Hanuman Prasad Potdar, Gita Press, Gorakhpur.
3. Sri Surya Pal Singh, Raja Saheb of Awagarh, District Etah.
4. Sri Swami Hariharanand Saraswati *alias* Karpatriji, President, Bhartiya Ram Rajya Parishad, Banaras.

APPENDIX XI

List of the witnesses examined by the Cattle Economics Sub-Committee of the Gosamvardhan Enquiry Committee, Uttar Pradesh.

MORADABAD

1. Sri Taffazzul Husain,
2. Representative of Pursarthi Committee,
3. Representative of Bhartiya Jan Sangh,
4. Representative of Goshala Committee.

RAMPUR

5. Representative of Arya Samaj,
6. Representative of Sarafa Committee,
7. Representative of Gorachani Sabha.

RAMNAGAR

8. Sri D. R. Arora, Manager, Concentration Camp.

HAPUR

9. Lala Hardeo Sahai,
10. President Arya Samaj,
11. Representative of Bhartiya Jan Sangh,
12. Representative of Congress (Sri Pyare Lal),
13. Representative of Merchants Association,
14. Representative of Gosewa Sangh, U. P.,
15. Representative of Jain Samaj Sangh of Hapur,
16. Sri Dhurendra Shastri,
17. Sri Prem Swaroop Gupta.

BAREILLY

18. District Magistrate,
19. President District Board,
20. President Goshala (Sri Roshan Lal),
21. President Jan Sangh (Sri Lakshmi Narain),
22. President Arya Samaj (Sri Chand Narain Sharma).

GORAKHPUR

23. Sri Vishnu Sahai Sharma, Principal, Agriculture School,
24. Sri U. N. Srivastava, Additional District Magistrate,
25. Sri Rama Shanker, Sarpanch, Chargawan,
26. Sri Mohammad Habib of Nautan,
27. Sri Sakhawat Husain of Nautam,
28. Sri G. D. Pathak, Manager, Sariya Dairy Farm, Sardarnagar,
29. Sri Mohsim Ali, District Livestock Officer,

30. Sri Laxmi Shanker Verma (Hindu Mahasabha), Chairman, Municipal Board,
31. Sri Achaibar Singh, M.L.A.,
32. Sri Raja Ram Vaid (Ram Raj Parishad),
33. Sri Devendra Pratap, M.L.A.,
34. Sri Altaf Husain, Proprietor, Agriculture Farm, Sheikhoopura.
35. Sri Harihar Prasad,
36. Representative of Jan Sangh.

DEORIA

37. District Magistrate,
38. Sri Suraj Narain Dhar Divedi, Joint Managing Director Co-operative Bank, Consumer's Co-operative,
39. Sri Satya Bartji, Barhaj Ashram.
40. Sri Panna Lal Gautam, Manager, Gaushala Padrauna,
41. Sri Jagan Nath Prasad, Visharad, Vakil, Secretary District Hindu Mahasabha and Member Gaushala Committee,
42. Sri Phool Chandra Gupta, Vice Chairman, Arya Samaj,
43. Sri Candrama Prasad, Vakil, New Chairman, Municipal Board (Member Arya Samaj and Congress Party).

BANARAS

44. Pt. Ram Autar Pandey, General Secretary, Bharat Dharm Mahamandal,
45. Pt. Kashi Nath Shastri Divedi, Choti Peri, Member Bharat Dhram Mahamandal,
46. Sri S. N. Tewari, Assistant Registrar, Co-operative Societies and District Planning Officer,
47. Sri S. K. Saigal, Additional District Magistrate,
48. Sri G. N. Srivastava, District Livestock Officer,
49. Sri Rishi Narain Shastri, Ex-President, District Congress Committee and now President District Co-operative Fedration.
50. Sri Deo Murti Sharma, M.L.A.,
51. Sri Dewan Ram Chandra Kapoor, President Banarsi Silk Merchants Association,
52. Sri Nagesh Upadhya , General Secretary, Ram Raj Parishad,
53. Sri Krishana Nand Ji, Principal, D. A. V., College,
54. Sri Badri Nath Shukla, Head Adhyapak, Sanskrit College,
55. Sri Sheo Bhooshan Pandey, Adhyapak, Sanskrit College,
56. Pt. Ganga Shanker Dixit, Secretary Praja Socialist Party,
57. Sri Purshotam Dass, Member, Praja Socialist Party,
58. Sri Bhajan Lal Chaturvedi, Administrator, Municipal Board,
59. Sri Thakur Prasad Sharma, Executive Officer, Municipal Board,
60. Pt. Sita Ram Jha, Jotisachar, Professor, Sanskrit College,
61. Sri Rash Bihari Singh, President, District Congress Committee,

62. Dr. B. Thamgama, Ex.ML.A.,
63. Pt. Sabhapati Upadhaya, M.L.C., Principal, Birla Sanskrit College,
64. Sri Singhal, Manager, Banaras Hindu University, Gaushala,
65. Sri Gauri Nath Pathak, Secretary, Kashi Pandit Sabha,
66. Sri Govind Malviya,
67. Sri Gauri Nandan Upadhya, Advocate, President R. S. Sangh,
68. Sri Kubair Nath Shukul, M.A., Registrar, Government Sanskrit Examinations, U. P.

ALLAHABAD

69. Sri Shiv Nath Katju, M.L.A.,
70. Sri P. L. Sharma, Deputy Director of Animal Husbandry,
71. Sri Jagan Nath Prasad Misra, Assistant Registrar, Co-operative Societies.
72. Sri Abdul Majid, Cattle Breeder, Katra,
73. Sri Bachchan Singh, Village Pachoaonla P. O. Khiri,
74. Sri Shyam Lal Ji, M.L.A.,
75. Sri Ganga Prasad Upadhya, Bhut-purv Mantri, Servadeshik Arya Pratindhi Sabha, Kala Press and President Arya Pratinidhi Sabha, U. P., Lucknow,
76. Sri Parbhat Shastri, Daraganj,
77. Sri Hira Lal Yadav, New Katra,
78. Sri Debi Prasad,
79. Sri Hira Lal Yadva,
80. Sri S. K. Ghosh, Proprietor Gosh Dairy,
81. Sri Narendra Shanker Mathur, District Planning Officer,
82. Sri Radhey Shyam Pathak,
83. Sri O. P. Agarwal, Naini Agricultural Institute,
84. Sri Raj Narayan Singh.
85. Sri Bhullan Singh, Mandal Committee Jan Sangh,
86. Sri Mool Narain Malvi,
87. Dr. Hafiz Saieed,
88. Sri Bhagwati Shanker,
89. Sri Narendra Shanker,
90. Sri Amba Dutt Pant, Administrator Municipal Board,
91. Sri Hari Kripal Sharma, Govt. College of Physical Education.
92. Sri Satya Prakash Deputy Registrar, Co-operative Societies,
93. Sri Mirtunjai Pratap Singh.
94. Sri Dakhani Prasad Yadav, President, District Board Association (Veterinary),
95. Sri Ram Adhar Yadav.
96. Sri Ganga Ram Gupta,
97. Sri Jagram Gupta,
98. Sri Ajodhya Prasad Officer's Training School,
99. Dr. Rajendra Singh Ji, Secretary Provincial R. S. S

100. Sri Lalloo Singh Ji.
101. Sri Prabhu Dutt Brahamchari,

AGRA

102. Sri Deoki Nandan, M.L.A.,
103. Sri J. N. Tewari, District Planning Officer,
104. Sri R. V. Nair, District Livestock Officer,
105. Sri Haji Inam Ali, Retired Engineer,
106. Sri Raja Ram Singhal, Proprietor, Singhal Dairy,
107. Sri B. N. Khandelwal, Secretary, Krishna Gaushala,
108. Sri Krishna Prasad Bhargava,
109. Sri M. A. Qureshi, Administrator, Municipal Board,
110. Sri Nand, Health Officer, Municipal Board,
111. Sri Pooran Chand Ji Advocate, Arya Samajist,
112. Sri Ganga Singhji, President District Congress Committee,
113. Sri Amool Shanker Prabhakar, Retired Deputy Director Agriculture,
114. Sri Sri Ram Sharma. (Raja-ka-Talab).

MEERUT

115. Sri V. S. Vinod, Vice President, Hindu Mahasabha, Municipal Commissioner, Editor "Sudya Times" and "Prabhat" Hindi Dalies of Meerut
116. Sri Gajadhar Tewari Vaid, President, Hindu Mahasabha,
117. Sri Vishnu Swaroop, Joint Secretary, Gopal Goshala, Secretary Merchants Association,
118. District Magistrate,
119. Sri Khoob Chand Ji,
120. Sri Fateh Singh Rana, M.L.A.,
121. Sri Raghubir Singhji, M.L.A.,
122. Sri Hari Singhji, M.L.A.,
123. Sri Sardar Singh Ji, Prominent Public Worker,
124. Sri Udai Raj Singhji,
125. Sri Hoshiar Singhji,
126. Sri Atal Singhji, Ex-Chairman, Notified Area Parakchit Garh,
127. Sri Fakir Chand, Secretary Gaushala, Hapur.
128. Sri Ritsoodan Singh, Secretary Merchants Association,
129. Sri Sookumar Jain, Member, Municipal Board,
130. Sri Parbhu Dayal, Chairman, Pilakhwa Municipal Board,
131. Sri Kailash Behari Lal, Vice-Principal, N. A. S. College,
132. Sri Nand Kishore, Joint Secretary Vaipar Mandal Soap Market,
133. Sri Randhir Singh Bansal, Advocate, Secretary Bar Association,
134. Pt. Gauri Shanker, Sampadak, Public,
135. Sri Amar Singh Uttra, Vakil, President, District Congress Committee,

136. Sri Balbir Singh Advocate,
137. Sri Kaloo Singhji, Vice-President, District Board,
138. Sri Mool Chand Shastri, President District Board,
139. Sri Premiji, Sampadak and Secretary 'Bharat Go-Sewak Samaj'
140. Sri Jawar Husain, Farmer, Nagla Chand,
141. Sri Mohammad Ishaq, Hakim, Mawana.

KANPUR

142. Sri Kunji Lal Gupta, Member, Provincial Congress Committee,
143. Sri Kanauji Lal, Tehsil Ghatampur,
144. Sri Ram Swaroop Gupta, M L.A.,
145. Sri Bhagat Dass Dayal, M.L A.,
146. Sri Ganga Shanker Pande, of Kanpur, Gaushala,
147. Sri Durga Dutt Kandoia, Kanpur Gaushala,
148. Sri Daya Ram, Kanpur Gaushala,
149. Sri Shyam Sunder Aginhotri, Kanpur Gaushala,
150. Sri Narendra Jit Singhji, Advocate, President, Provincial Rashtriya Swayam Sewak Sangh,
151. Sri Mohammad Hamza, Proprietor, U. P. Tanneries and President, Tanners Federation India,
152. Sri Manzoor Alam, Ex-Secretary, Tanners Federation,
153. Sri Anand Swaroop Bhatnagar, District Planning Officer,
154. Sri Cook, Manager, Cooper Allen Tanneries,
155. Sri Alam Singh, Lecturer, Animal Husbandry and Dairying, Agricultural College,
156. Sri Chandra Shekhar Shastri,
157. Sri Baikunth Singh Saigal, I. D. D.,
158. Sri Raghuber Dayal Bhatt, Ex-President, Congress Committee.

List showing names of persons whose evidence was recorded by the cattle Improvement Legislation sub-committee.

BANARAS

1. Sri Ram Autar Pande, Secretary Bharat Dharam Mahamandal,
2. Sri S. N. Tiwari, District Planning Officer,
3. Sri S. K. Saigal, I.A.S., Additional District Magistrate,
4. Sri Rishi Narain Shastri.
5. Sri Satya Murti Sharma, M.L.A.,
6. Sri Ram Chandra Kapoor, President, Silk Merchants Association,
7. Sri Nageshwar Upadhya, General Secretary, Ram Rajya Parishad,
8. Sri Krishna Nand, Principal D. A. V. College,
9. Sri Badri Nath Shukla, Principal Sanskrit College,
10. Sri Shiva Bhushan Pandhey,
11. Sri B. L. Chaturvedi, Administrator, Municipal Board,
12. Sri Sita Ram Jha,
13. Sri Girdhari Lal, President, City Congress Committee.

14. Sri Sabha Pati Upadhya, M.L.C.,
15. Sri Singhal, Manager, University Dairy Farm,
16. Sri Gopi Nath Pathak, Kashi Pandit Sabhaya,
17. Sri Govind Malviya,
18. Gauri Nanda Upadhaya.

ALLAHABAD

1. Sri S. N. Katju, M.L.A.,
2. Sri Jagannath Prasad Misra.
3. Sri Abdul Majid Sahib.
4. Sri Bachcha Singh.
5. Sri Shiam Lal, M.L.A.
6. Sri Ganga Prasad Upadhaya.
7. Sri S. K. Ghosh.
8. Sri Bhulai Singh.
9. Dr. Mohammad Syed.
10. Sri Bhagwati Shankar.
11. Sri S. N. Mathur, District Planning Officer
12. Sri Radhey Shiam Pathak.
13. Sri O. P. Agarwal.
14. Sri Raj Narain Singh.
15. Sri A. D. Pant, Administrator, Municipal Board.
16. Sri Hari Kripal.
17. Sri Satya Praka.
18. Ritunjaya Pratap Singh.
19. Sri Ram Adhar Yadau.
20. Sri Ganga Ram Yadav.
21. Sri Gangram Gupta.
22. Lalloo Singh.

FAIZABAD

1. Sri Brahma Deo Shastri, Editor, 'Sanskrit Saket'.
2. Sri Kedar Nath Arya.
3. Sri Ayodhaya Prasad Arora, Secretary, Arya Samaj.
4. Sri Maulana Nasir Sahib, M.L.A.,
5. Sri Awadhesh Pratap Singh, M.P.A.,
6. Sri Ramadhin Das, Vishambhar.
7. Sri Lakshman Prasad Singh.
8. Sri Ram Gopal Visharad.
9. Sri Mirza Muztava Ali, Advocate.
10. Sri Surendra Nath Kapoor.
11. Sri Manohar Lall Tandon.
12. Sri Ram Kishore Shastri.
13. Sri B. B. Tandon, I.A.S., District Planning Officer.
14 Sri Mahant Haribar Das.
15 Sri Pandit Raja Ram Das.

16. Sri Mahant Raghubar Prasad.
17. Sri Baba Ram Niwas Das.
18. Sri Baba Ram Karan Das, Paramhans.
19. Sri Kamla Kant Acharya.
20. Sri Raja Ram, President, District Board.
21. Sri Guru Datt Singh, Chairman, Municipal Board

HARDWAR (SAHARANPUR)

1. Sri D. C. Dube, Resident Magistrate.
2. Sri Panna Lal Bhalla, Chairman, Municipal Board.
3. Sri Dharm Pal, Gurukul.
4. Sri Niranjan Deva, Gurukul.
5. Dr. Satya Pal.
6. Dr. Jagdish Kaushal.
7. Sri Bhoj Raj Singh, District Planning Officer.
8. Sri Satya Prakash Bhargava.
9. Sri Ganesh Datt.
10. Sri Arjun Singh, President, District Board.
11. Some Seven or Eight persons of Jan Sangh.

RISHIKESH (DEHRA DUN)

1. Sri Parash Ram.
2. Sri V. C. Sharma, District Magistrate.
3. Sri Y. M. Parnerkar, Rishikesh.
4. Sri Amar Nath Vaid
5. Secretary, Arya Samaj, Dehra Dun
6. Sri C. B Singh.
7. Swami Shivanandji.

List showing names of persons/institutions invited by the Cattle Improvement Legislation Sub -Committee to tender evidence.

1. BANARAS

1. The District Magistrate or his representative and the District Planning Officer.
2. The President Arya Samaj.
3. The Principal, Kashi Vidhyapitha.
4. The President, Bar Association.
5. The Administrator, Municipal Board.
6. The President, District Board
7. The President, Bharat Dharam Mahamandal.
8. The Ram Krishna Mission, Home of Service.
9. Swami Karpatriji.

10. Acharya Narendra Deva, Vice-Chancellor Banaras Hindu University, Banaras.
11. Dr. Bhagwan Das, Sewa Ashram, Banaras.
12. Sri Brahma Datt Jigyasu, Azmatgarh Place, Moti Jhil Banaras, and
13. Presidents of various political parties.

ALLAHABAD.

1. The District Magistrate or his representative and District Planning Officer.
2. The Administrator, Municipal Board, Allahabad.
3. The President, District Board, Allahabad.
4. The President, Bar Association.
5. The Chief Organiser, Sewa Samiti, Allahabad.
6. The Presidents of various Political Parties.
7. Sri Purshottam Dasji Tandon, M.P.
8. Sri Prabhu Dattji Brahmachari, Jhusi, Allahabad.
9. Sri A. C. Banerji, Vice-Chancellor, Allahabad University, and
10. The President, Arya aSmaj.

FAIZABAD

1. The Deputy Commissioner or his representative and the District Planning Officer.
2. The Chairman, Municipal Board, Faizabad.
3. The President, District Board, Faizabad.
4. The President, Bar Association.
5. Sri Acharya Narendra Deva, M.P.
6. Sri Swami Tyaganand, Principal, Gurukul, Ajodhya.
7. Presidents of Political Parties, and
8. The President, Arya Samaj.

HARDWAR DISTRICT SAHARANPUR

1. The District Magistrate or his representative and the District Planning Officer.
2. The Chairman, Municipal Board, Hardwar.
3. The President, District Board, Saharanpur.
4. The Presidents of various political Parties at Hadwar.
5. The Principal, Rishikesh and Gurukul, Hardwar.
6. The Principal, D. A. V., College.
7. The President. Arya Samaj, Hardwar.
8. Maulana Husain Ahmad Madni of Deoband.

RISHIKESH (DEHRA DUN)

1. The District Magistrate or his representative and District Planning Officer.
2. The Chairman, City Board.
3. The President, District Board.
4. The President, Bar Association.
5. The President, Arya Samaj.
6. Sri Baba Kali Kamaliwala, Rishikesh, (Dehra Dun).
7. Sri Y. M. Parnekar, Ashram Pashulok, Rishikesh (Dehra Dun).
8. The President of various Political Parties.
9. The Principal, D. A. V., College, Dehra Dun.

APPENDIX XII

List of scarcity Feeds

1. Mango seed kernel (Mangifera indica linn),
2. Jaman seed (Eugenia jambolana),
3. Panewar (Cassia tora linn). seeds,
4. Acacia arabica seeds,
5. Tamarind seeds (Tamarindus indica linn),
6. Munj (Saccharum munj)
7. Kans (Saccharum spontameum linn),
8. Kantiara (Carthamus oxyacantha),
9. Panewar straw (Cassia tora linn) and seeds,
10. Groundnut husk (Arachis hypogoon linn),
11. Mahua flowers (Bassia latifolia),
12. Mahua cake (Bassia latifolia),
13. Rain tree fruit (Enterolobium saman),
14. Sanhemp (Crotelaria juncea),
15. Tapioca starch (Manihot utilisma) roots,
16. Cofee husk (Coffea arabica),
17. Guja cake (Guizotia abyssinica compositae),
18. Entrails,
19. Mangrove (Aricinia officinalis),
20. Rice husk,
21. Virginia tobacco seedcake,
22. Juar (Andropogon sorghum) husk,
23. Date stones,
24. Maize grit.

APPENDIX XIII

INTERIM RECOMMENDATION OF GOSAMVARDHAN ENQUIRY COMMITTEE

Recommendation no. 1.—Apart from the deeply rooted religious sentiments of very large number of the residents of Uttar Pradesh, it is not only desirable but imperative in the interests of national economy, national health and national goodwill to save, protect and improve the cow and her progeny. Among other measures to serve this, the Committee is strongly of the opinion that the slaughter of the cow and her progeny should be totally banned.

For a number of reasons, the Committee is not in favour of the draft Bill recently sent by the Government of India imposing a partial ban on the slaughter of cows.

Having considered the pros and cons of the problem, the Committee is firmly of the opinion that in the totality of the circumstances, cow slaughter be totally banned by the State by legislation once for all. Heavy penalties must be provided for an offence against such a law.

With immediate effect, slaughter of cows in unauthorised premises must be put down with a strong hand.

For such a ban by legislation to be successful and effective, mass consciousness in favour of the cow and her breed must be awakened and re-kindled by non-official agencies and organisations working in constructive spirit in this sphere of national life.

Recommendation no. 2.—Auction of animals, culled or surplus on the Government Farms in western districts, should be stopped immediately. Further if they are not in demand in the District where the Farm is situated, they should be sent to the central districts and given on taqavi or/and concessional rates where they will give better results, even for upgrading work than the local non-decript animals do.

Recommendation no. 3.—Government State Farms should keep cows for milk yield and breeding draught animals but if the buffaloes are to be kept at all, they should be kept only for their fat production.

Recommendation no. 4.—Every Agricultural Farm should have a minimum number of animals that would fit in its economy to demonstrate the value of mixed farming.

Recommendation no. 5.—Private breeders should be encouraged to take up cattle breeding on scientific lines. With a view to give incentive to them to take up this work, a reasonable price for the pedigreed animal should be guaranteed by the department.

In this connection, the Committee recommends that the valuable heard of Raja Saheb of Awagarh should be saved from destruction.

Recommendation no. 6.—In view of the constant and increased demand for better quality bulls, the Animal Husbandry Deparmtent should have adequate provision and facility to buy outstanding animals at a good price.

Recommendation no. 7.—The State Government should request the Government of India that excise duty should be levied on the milk powder imported from foreign countries and the proceeds so collected should be handed over to the States to be spent on improvement of cattle wealth.

Recommendation no. 8.—Suitable legume and other grasses that can be grown under the shade of the trees in orchards be developed. For encouraging fodder production in orchards, such land should be exempted from the provisions of the Agricultural Income Tax Act.

Recommendation no. 9.—Taqavi loans rules should be simplified so that the present cumbersome and lengthy procedure is reduced to the barest minimum.

Recommendation no. 10.—Irrigation facilities should be provided for fodder crop either free or at considerably reduced rates.

Recommendation no. 11.—Common pasture lands to be developed after consolidation of holdings should have controlled grazing and irrigation facilities.

Recommendation no. 12.—The collection of scarcity feeds like Jamun Seed, Mango Kernel, Neem Seed, and use of unusual feeds like Urea should be encouraged to supplement the deficiency in nutrition. Work in respect of the utilisation of Jamun Seed, Mango Kernel and Neem Seed should be popularised through Gaon Sabhas and Cottage Industries Organisation.

Recommendation no. 13.—It was brought to the notice of the Committee that a suitable plant costing near about Rs.250 and suiting village conditions had been adapted by Sri Satish Candra Das Gupta, for utilising cow dung for production of gas for the purpose of cooking. This plant enables the cow dung to be utilised as fuel without in any way affecting its manurial value. In fact the resultant product was a first class manure and in many respects better than cow dung as composted. The Committee is strongly of the view that experimental trials should be made with this plant at 2 or 3 centres and as soon as its efficacy is proved, arrangements should be made to spread it in villages through the agency of Community Projects, National Extension Service Blocks and Gram Panchayats.

Recommendation no. 14.—The Committee was apprised of the simple process of utilisation of carcass of dead and fallen animals. It was recommended that after proper flaying of the hides and their treatment, the resultant carcass should be utilised in accordance with the process evolved by Sri Satish Chander Das Gupta for utilisation of flesh and bones as manure, poultry feed and cattle feed. This work should also be spread through Community Projects, National Extension Blocks and Gram Panchayats.

Recommendation no. 15.—The Committee observed that it will be in the best interest of livestock development that all outstanding animals in each village should be registered and their export outside the State without permit, banned. So long as best cow continued to go to Calcutta, no amount of efforts in breeding better animals can achieve any effective results as the best of our cattle go there and perish.

The Committee therefore strongly recommends that the export of good milch cows to Calcutta and other big cities outside the State without permit should be banned forthwith.

APPENDIX XIV

"गो सम्बन्धी वेदमंत्र"

(Sent by Sri Gopal Shastri, Member, G. E. C.)

"माता रुद्राणां दुहिता वासूनां, स्वसादित्यानाममृतस्य नाभिः ।
प्रनु वोचं चिकितुषे जनाय, मा गामनागाम, दितिं वधिष्ट ।" (ऋग्वेद ८–१०१–१५)

अर्थ––गौ ! (गाय) शत्रुओं को रुलाने वाले वीरों की माता है, रक्षा करती है । धन-धान्य को पूर्ण करने वाली है । तेजस्वी लोगों की बहन है, अमृत (दूध, दही, घी) का तो केन्द्र ही है । इस लिये विवेगी पुरुषों से मैं कहता हूं कि ऐसी निरपराधिनी तथा अघ्न्या अवध्या गौ को कभी भी नहीं मारो ।

"यूयं गोवो मेदे यथा कृशं चिदश्रीरंचित्कृणुथा सुप्रीतकम् ।
भद्रं कृणुथ गृहं भद्रवाचो, बृहद्वो वय उच्यते सभासु ।।" (ऋग्वेद ८–१०१–१६)

अर्थ––गौओ ! तुम कृश-दुर्बल व्यक्ति को हृष्ट-पुष्ट करती हो ।।' और कुरूप को सुन्दर करती हो तथा अपने मंगलमय शब्दों से हमारे गृह (घर) को मंगलमय करती हो, इसी कारण सभाओं (समाजों) में तुम्हारा यशोगान होता है ।

"प्रजावती सूयवसे रुशन्तीः, शुद्धाः अपः सुप्रपाणे पिवन्ती ।
माव:स्तेन (ईशत) माघशंसः, परिवो रुद्रस्य हेतिर्वृणक्ति ।।" (ऋग्वेदि ८–१०१–१७)

अर्थ––गौओं ! तुम बहुत से बच्चे जनों, चरने को तुम्हें बहुत से सुन्दर चारे प्राप्त हों तथा सुन्दर जलाशय में स्वच्छ जल पीयो, तुम्हें दुष्टजन जीव न सता सकें, रुद्रों (वीरों) का शस्त्र तुम्हारी बराबर क्षा करता रहे ।

"पयत्मा सर्पिषा दध्ना शकृताप्यथ चर्मणा,
अस्थिभिश्चोप कुर्वन्ति बालैः शृंगैश्च भारत । (महाभारत शांति पर्व)
गावो लक्ष्याः सदा मूलं गोषु पाप्मान विद्यते,
अमृतं हाप्ययं दिव्यं क्षरन्ति च वहंति च। (महाभारत शांति पर्व)
तेजसा वपुषा चैव गावो वन्हिसमा भुवि,
गावोहि सुभहत् तेजः प्राणिनां हि सुखप्रदाः ।" (महाभारत शांति पर्व)

अर्थ––भीष्म ने युधिष्ठिर से कहा है-हे भारत! गौएं दूध, घी, गोबर, मूत्र, चाम, हड्डी, बाल, सींग, गोरोचन प्रभृति अपने सारे अंगों से राष्ट्र की सेवा करती हैं । इसलिये गौएं राष्ट्र का बहुमूल्य धन हैं । प्रत्येक दशा में गौएं लक्ष्मी (सम्पत्ति) का मूल कारण हैं । गौ में कोई भी दोष नहीं है । ये गौएं अपने स्तन में अमृत रखती हैं और उसे मनुष्यों को देती हैं ।

गाएं अपने तेज से और शरीर से अग्नि के समान हैं । (अर्थात् आग से जैसे सारे रोग नष्ट हो जाते हैं, और जहां आग रहती है वहां तामसी जीव-जन्तु नहीं जा सकते उसी प्रकार जिस घर में गौएं रहती हैं वहां कोई व्याधि नहीं फैलती और उस घर में रोग या तामसी जीव-जन्तु भूत प्रेत प्रभृति की बाधा नहीं होती है ।) और गाएं बड़ी तेजस्वी वस्तु हैं तथा प्राणियों को सभी दशा में सुख ही पहुंचाती हैं ।

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